Interim Report

TO THE EIGHTY-NINTH TEXAS LEGISLATURE

HOUSE SELECT COMMITTEE ON ARTIFICIAL INTELLIGENCE & EMERGING TECHNOLOGIES

NOVEMBER 2024

HOUSE COMMITTEE ON ARTIFICIAL INTELLIGENCE & EMERGING TECHNOLOGIES, SELECT
TEXAS HOUSE OF REPRESENTATIVES
FINAL INTERIM REPORT 2024

A REPORT TO THE
HOUSE OF REPRESENTATIVES
89TH TEXAS LEGISLATURE

GIOVANNI CAPRIGLIONE
CHAIRMAN

COMMITTEE CLERK
KATY ALDREDGE

Committee On
Artificial Intelligence & Emerging Technologies, Select

November 22, 2024

Giovanni Capriglione
Chairman

P.O. Box 2910
Austin, Texas 78768-2910

The Honorable Dade Phelan
Speaker, Texas House of Representatives
Members of the Texas House of Representatives
Texas State Capitol, Rm. 2W.13
Austin, Texas 78701

Dear Mr. Speaker and Fellow Members:

The Committee on Artificial Intelligence & Emerging Technologies, Select of the Eighty-eighth Legislature, hereby submits its final interim report, including recommendations for consideration by the Eighty-ninth Legislature.

Respectfully submitted,

Giovanni Capriglione

Jeff Leach

Oscar Longoria

Angelia Orr

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OVERVIEW

Charge

By proclamation dated April 2, 2024, Dade Phelan, Speaker of the House of Representatives, formed the House Select Committee on Artificial Intelligence & Emerging Technologies.

The committee was created to conduct a comprehensive review of the advancements in artificial intelligence and emerging technologies (AI/ET) and the economic, ethical, and societal implications of those advancements. The review includes:

1. Examining the current state of AI/ET and its uses by public and private actors in modern society;
2. Determining the impact of the application of AI/ET on various sectors of society, including employment, healthcare, homeland and national security, and transportation;
3. Identifying policy considerations necessary to ensure the responsible deployment of AI/ET in Texas by both public and private actors; and
4. Formulating recommendations for legislative, policy, regulatory, and remedial actions needed to address the challenges and opportunities presented by AI/ET.

The committee was directed to submit an initial report no later than May 16, 2024, in the same manner as an interim study committee under Rule 4, Section 61, Rules of the House of Representatives. The initial report can be found here.

Introduction

The Select Committee on Artificial Intelligence and Emerging Technologies met on April 29, 2024 to hold an initial hearing to receive a broad overview of artificial intelligence and emerging technologies. The committee heard from a comprehensive range of witnesses to provide an introduction to AI covering the following topics:

- How AI affects the military;
- Why AI is making the prosecution of child pornography laws difficult,
- How AI can impact elections;
- How AI is making cybersecurity both more efficient and more problematic; and
- A comparison of how industry and advocacy associations differ in their arguments.

The Select Committee on Artificial Intelligence and Emerging Technologies met on October 1, 2024, to hold a hearing to receive an overview of artificial intelligence and emerging technologies. The committee heard from a comprehensive range of witnesses on the following topics:

- The impact of AI/ET on transportation;
- The impact of AI/ET on healthcare;
- The impact of AI/ET on the unlicensed industries;
- The impact of AI/ET on the licensed industries
- Formulating legislative, policy, and regulatory recommendations.

The committee's initial report gave an overview of the testimony the committee heard in the April 29, 2024 hearing, sharing basic principles around AI/ET and providing detailed summaries of each witness's testimony and policy recommendations. The committee's final report will give an overview of the October 1, 2024, hearing and share policy recommendations of the select committee.

INTERIM STUDY TOPICS

TOPIC I: Impact of AI/ET on Transportation

TOPIC II: Impact of AI/ET on Healthcare

TOPIC III: Impact of AI/ET on the Unlicensed Industries

TOPIC IV: Impact of AI/ET on Licensed Industries

TOPIC V: Formulating Legislative, Policy, and Regulatory Recommendations

TOPIC I: The Impact of Artificial Intelligence and Emerging Technologies on Transportation

BACKGROUND

As AI advances, the transportation sector is experiencing transformative change, from optimized traffic flow to improved supply chain logistics. These innovations hold promise for improving efficiency, reducing environmental impact, and increasing public safety. However, AI's deployment in transportation raises critical questions about data privacy, workforce development, and infrastructure investment.

SUMMARY OF COMMITTEE ACTION

The committee held a public hearing on October 1, 2024, with both invited and public testimony. The individuals listed below provided testimony to the committee on this charge.

Public Hearing: October 1, 2024

Witness List: October 1, 2024 – Austin, Texas, Capitol Extension E2.010, at 10:00am

1) Ronnie Hawkins (Self; Angelo State University)
2) Jason Roys (Self; SDV International, LLC)
3) Anh Selissen (TxDOT)
4) Ben Bhatti (Optym)
5) Vimal Vasudevan (Self; Texas AI Association)

The information below is largely based on the oral and written testimony of the individuals and organizations listed above. The committee also received written comments on this charge from Ariel Santschi (Self).

SUMMARY OF TESTIMONY

AI has revolutionized transportation logistics, with major implications for the efficiency of goods movement across the state. AI-driven systems are reshaping how companies plan and execute their supply chains, enabling them to analyze and predict demand, optimize routing, and minimize empty vehicle trips. The testimony highlighted how AI's capabilities in predictive analytics allow companies to manage their assets better, using data-driven insights to enhance efficiency. For instance, Ben Bhatti of Optym, testified that many companies rely on manual planning processes for their freight, which are time-intensive and error-prone. With intelligent routing systems powered by AI, companies can increase driver utilization, streamline operations, and reduce transportation costs. Optimized routing also has environmental benefits, as reduced fuel consumption and fewer idle vehicles help decrease carbon emissions, making transportation logistics more sustainable. However, expanding AI applications in supply chain logistics will require infrastructure and workforce training investments so that employees are equipped to manage and maintain these systems effectively.

AI's potential in traffic management and public safety is another focal point. Advanced AI systems can monitor traffic patterns in real time, enabling faster response to road incidents, improving congestion, and minimizing accident risks. Anh Selissen, Chief Information Officer of the Texas Department of Transportation (TxDOT), shared how AI has been successfully implemented in TxDOT's traffic incident management systems. AI tools analyze data from emergency response systems to detect accidents quickly, reducing response times by up to eleven minutes per incident and decreasing the likelihood of secondary crashes by nearly 30%. These improvements not only enhance road safety but also contribute to smoother traffic flow and reduced vehicle congestion. With such proven benefits, Texas could consider expanding the deployment of AI-powered traffic management systems statewide, leveraging data from various sources to support real-time decision-making. This would involve further investment in connected infrastructure, such as sensors and cameras, which would be essential to enable seamless data integration and analysis.

The issue of data privacy emerged as a central concern, particularly in light of AI's reliance on massive amounts of personal information. Jason Roys of SDV International highlighted how the growth of connected vehicles has expanded the types of data companies collect, including sensitive data like contact lists from phones connected to the vehicle, GPS locations, and even biometric information. Many new vehicles, he noted, come equipped with infotainment and telematics systems that store information from drivers' and passengers' mobile devices. Once a mobile device is connected to a vehicle via Bluetooth or USB, it transfers data such as personal contacts, text messages, and location history, often without the user's full understanding. Roys pointed out that while manufacturers offer delete functions, they rarely fully erase data, leaving residual information that can be accessed by others, creating potential security risks. His testimony suggested that legislators consider implementing policies requiring car dealers and rental companies to fully delete stored data upon resale or rental return, protecting consumer privacy and reducing the risk of data exploitation. As the transportation sector continues to gather more data from connected vehicles, robust privacy regulations are essential to ensure users' personal information is safeguarded.

In the realm of infrastructure, AI applications in transportation logistics and traffic management demand significant investments in technology and training. According to TxDOT, all proposed AI solutions undergo rigorous risk assessments before approval. Selissen detailed TxDOT's pilot program, which involved an AI-based chatbot designed to answer public queries and support employees. These pilots allow TxDOT to test AI's potential while refining risk management strategies before deploying solutions more widely. TxDOT's pilot approach has allowed the agency to identify productivity benefits – such as accelerating response times for processing invoices and onboarding staff – while carefully evaluating potential risks. Expanding such AI initiatives would require further infrastructure investment, as well as guidelines for secure data management practices. Witnesses recommended Texas establish a standardized framework for evaluating and approving AI applications in public sector projects to ensure that AI implementations align with the state's data security, transparency, and ethical standards.

AI's role in workforce transformation is equally important to its technological impact. AI applications in transportation often automate routine tasks, such as route planning and inventory management, which might displace some traditional roles. However, AI is not a replacement for

human oversight; rather, it enhances operational efficiency by supplementing human skills with powerful analytical tools. Vimal Vasudevan of the Texas AI Association noted that AI will likely augment rather than replace jobs, with the key challenge being the upskilling of workers to adapt to new technologies. Vasudevan advocated for statewide training initiatives and incentives to help workers transition to roles that involve managing AI-driven systems. Workforce retraining is vital to equipping employees with the skills needed to oversee and interpret AI data, particularly in logistics, where real-time decision-making is critical to operations. He noted that policies that promote workforce training would help ensure Texas' labor market remains competitive as the transportation industry embraces digital innovation.

Another benefit of AI lies in its capacity to enhance safety and cybersecurity across the transportation sector. Ronnie Hawkins, President of Angelo State University, highlighted Texas' leadership in cybersecurity through the establishment of the Regional Security Operations Center (RSOC), which provides cybersecurity support to local governments. Cybersecurity becomes paramount in preventing unauthorized access to sensitive information and systems as transportation systems become more connected and AI applications expand. Angelo State's RSOC, for example, is positioned to provide cybersecurity support for connected infrastructure, reducing risks to public safety and offering hands-on experience to students preparing for careers in AI and cybersecurity. Hawkins argued that fostering a collaborative environment between universities, government entities, and industry partners will be crucial in developing a workforce skilled in cybersecurity measures. His testimony also emphasized the importance of integrating AI and cybersecurity training into Texas' education system, from K-12 through higher education, to prepare students for the evolving demands of the workforce.

While AI holds promise for improving transportation systems, experts underscored the importance of ethical guidelines and public trust. Witnesses expressed concerns over potential overreliance on AI for critical decision-making, especially in cases where human judgment is irreplaceable. For instance, AI systems can interpret data from crash scenes or driver behavior, but they lack the nuance of human assessment in complex legal or ethical scenarios. Policymakers should ensure that AI is used to complement human oversight rather than replace it in sensitive areas. For example, law enforcement's use of AI to interpret data from body or traffic cameras should be carefully monitored to avoid potential bias and inaccuracies that could impact legal outcomes. Texas should consider implementing transparency requirements for AI applications in public services to safeguard public trust, allowing citizens to understand how AI influences decision-making processes and ensure accountability.

In conclusion, AI is poised to transform Texas' transportation sector, bringing benefits in operational efficiency, safety, and sustainability. However, realizing these benefits will require strategic policy actions to address data privacy, cybersecurity, workforce development, and infrastructure investment. Texas has the opportunity to lead the nation and harness the full potential of AI to modernize the transportation sector and ensure that technological advancements contribute to a safer and more efficient future.

TOPIC II: The Impact of Artificial Intelligence and Emerging Technologies on Healthcare

BACKGROUND

Artificial intelligence (AI) is increasingly transforming the healthcare landscape, offering powerful tools to enhance patient care, streamline administrative tasks, and drive groundbreaking research. In considering a legislative framework supporting the responsible use of AI in healthcare, it is crucial to balance the potential for innovation with safeguards that protect patient safety, data privacy, and equitable access to advanced technologies.

SUMMARY OF COMMITTEE ACTION

The committee held a public hearing on October 1, 2024, with both invited and public testimony. The individuals listed below provided testimony to the committee on this charge.

Public Hearing: October 1, 2024

Witness List: October 1, 2024 – Austin, Texas, Capitol Extension E2.010, at 10:00am

1) Caroline Chung (Self; University of Texas MD Anderson Cancer Center)
2) Jamie Dudensing (Texas Association of Health Plans)
3) Nicole Lusardi (Texas Hospital Association)
4) Peter McCaffrey (University of Texas Medical Branch)
5) Ezequiel Silva (Self; Texas Medical Association)

The information below is largely based on the oral and written testimony of the individuals and organizations listed above. The Committee did not receive any written comments on this charge.

SUMMARY OF TESTIMONY

AI's utility in healthcare spans a broad range of uses, from clinical decision support to administrative efficiency. In clinical care, AI can assist in diagnosing complex conditions, such as identifying early signs of life-threatening events like pulmonary embolisms or large vessel occlusions in the brain. Dr. Ezequiel Silva, an interventional radiologist, illustrated this with examples from his work, where AI software identifies high-risk cases of pulmonary embolism by analyzing imaging data, allowing physicians to prioritize treatment. This technology helps expedite diagnosis and intervention, which can reduce ICU stays and ultimately save lives. Dr. Silva emphasized that AI can alert not only radiologists but the entire care team, enhancing coordinated response for conditions where time is critical. Similarly, AI's ability to detect subtle changes in imaging – often imperceptible to the human eye – has transformed radiology, enabling early detection and intervention, which are key to better patient outcomes. These diagnostic capabilities improve clinical workflows and augment physicians' capabilities, allowing healthcare teams to prioritize cases based on urgency and reduce the risks associated with delayed diagnosis.

However, the integration of AI into clinical workflows is not without challenges. Dr. Caroline Chung, Chief Data and Analytics Officer at MD Anderson Cancer Center, highlighted the risks of using AI models trained on generalized data that may not apply accurately to specialized populations, such as cancer patients. She explained that models designed for the general population often failed in MD Anderson's cancer patient context, where immune system variations due to chemotherapy and immunotherapy treatments differ significantly. Ensuring AI models perform reliably across diverse patient populations requires "contextual training" – the process of adapting models to reflect the specific patient demographics, clinical settings, and data of each facility. This precaution is essential to prevent AI errors that could jeopardize patient safety. Dr. Chung argued for establishing standards for model testing, urging that AI implementations in healthcare must consider the unique environment and data context of each institution.

In addition to enhancing clinical care, AI can serve an essential role in administrative tasks, reducing the strain on healthcare workers and lowering operational costs. Nicole Lusardi of the Texas Hospital Association discussed how AI-driven tools streamline tasks like appointment scheduling, claims management, and clinical documentation, tasks that are particularly burdensome in smaller or resource-limited healthcare facilities. However, Lusardi highlighted an equity concern: the gap in AI access between larger healthcare institutions and smaller rural hospitals. Without targeted support, rural and underfunded facilities may struggle to adopt these technologies, which would widen existing disparities in healthcare quality and access. To address this, Lusardi suggested legislative measures may be necessary to ensure that smaller hospitals have the resources to implement AI solutions, leveling the playing field across healthcare settings.

In healthcare research, AI accelerates discoveries by transforming vast, unstructured datasets – like physician notes and genetic data – into actionable insights. Dr. Peter McCaffrey, Chief AI Officer at the University of Texas Medical Branch, explained how AI allows researchers to analyze complex biological interactions within the body, such as genetic expressions and cellular functions, revealing new pathways for treatment. In areas like oncology, where genomic data can inform precision treatments, AI enables healthcare providers to deliver more targeted and effective therapies. Dr. McCaffrey noted that AI can sift through genetic data at unprecedented speeds, making it possible to explore thousands of gene interactions in minutes, a feat impossible for individual researchers. Yet, with this power comes responsibility: AI tools used in research should comply with stringent ethical and privacy standards, especially when handling sensitive genetic data. Witnesses, including Dr. McCaffrey, suggested legislative policies should mandate transparency in how AI models are trained, used, and updated in healthcare research, ensuring patient rights are respected.

Another key area of AI's impact on healthcare is its role in patient data management and privacy. AI systems process massive volumes of sensitive patient data to generate insights; however, this raises concerns about data ownership, privacy, and the need for patients to consent to the use of their data. Dr. Silva emphasized the importance of maintaining patient control over their personal data, advocating for clear patient consent before any data is used for AI model training. Dr. Silva noted that while healthcare AI typically anonymizes data, to protect privacy, there remains a need for clear guidelines on data use and patient consent, especially as AI applications evolve. Current policies, such as the Health Insurance Portability and Accountability Act (HIPAA), provide a foundation for data privacy in healthcare, but specific standards tailored to AI applications could

further strengthen protections. Legislative action to update the Texas Data Privacy and Security Act (TDPSA) could clarify these standards, ensuring that patients' data rights remain a priority as AI use in healthcare expands.

The invited witnesses also emphasized the importance of workforce education to ensure that AI in healthcare is used responsibly. A significant concern is the lack of AI literacy among healthcare professionals, which could lead to over-reliance on AI systems and uncritical acceptance of AI-generated outputs. Dr. Chung underscored the need for educational programs to build AI literacy, explaining that MD Anderson has developed a data literacy course aimed at training healthcare workers to interpret and evaluate AI outputs critically. Without a critical understanding of AI limitations, healthcare workers may risk blindly trusting technology, potentially leading to serious errors. Education programs focused on AI literacy would empower healthcare professionals to assess AI outputs critically, understand AI's limitations, and make informed decisions that prioritize patient safety. Dr. Chung proposed that this training could be integrated into healthcare education for current and future medical professionals, fostering a workforce skilled in using AI thoughtfully and ethically.

Despite AI's advantages, its implementation should be guided by ethical considerations and a commitment to preserving the physician-patient relationship. Dr. Silva argued that while AI can support physicians, it cannot replace the trust and empathy inherent in the physician-patient bond. He warned that patients may feel uncomfortable with AI making critical healthcare decisions without human oversight, urging that legislative frameworks emphasize the need for human oversight, ensuring that AI augments rather than replaces healthcare professionals. Dr. Silva's testimony echoed a shared concern among the witnesses: that preserving the central role of healthcare providers in patient care ensures AI's potential is harnessed without compromising the personalized care that patients expect and deserve.

In conclusion, AI offers transformative potential in healthcare, with the ability to improve patient outcomes, streamline operations, and drive research innovations. To realize these benefits fully, thoughtful regulations should promote equitable access to AI, enforce data privacy protections, and establish rigorous testing standards for AI models to ensure safety across diverse populations. Furthermore, policies should mandate AI literacy programs for healthcare professionals and maintain a framework that values human oversight, preserving the central role of healthcare providers. By approaching AI implementation with these safeguards, we can ensure this powerful technology contributes to a more efficient, accessible, and compassionate healthcare system.

TOPIC III: The Impact of Artificial Intelligence and Emerging Technologies on the Unlicensed Industries

BACKGROUND

Artificial Intelligence is transforming unlicensed industries – sectors not governed by specific regulatory licenses – by introducing efficiencies, expanding capabilities, and driving innovation. These industries benefit from AI-driven improvements in operational processes, decision-making, and product creation improvements. However, while AI offers vast opportunities for growth and advancement, it also poses unique challenges. The witnesses on this topic explored ethical, legal, and social implications on AI and its use by unlicensed industries.

SUMMARY OF COMMITTEE ACTION

The committee held a public hearing on October 1, 2024, with both invited and public testimony. The individuals listed below provided testimony to the committee on this topic.

Public Hearing: October 1, 2024

Witness List: October 1, 2024 – Austin, Texas, Capitol Extension E2.010, at 10:00am.

1) Eyal Darmon (Accenture)
2) Yonatan Dor (Self)
3) Wifredo Fernandez (X Corp.)
4) Beena George (Self)

The information below is largely based on the oral and written testimony of the individuals and organizations listed above. The Committee did not receive any written comments on this charge.

SUMMARY OF TESTIMONY

AI is redefining unlicensed industries, from social media content creation to system modernization, providing tools that enhance productivity, reach, and operational efficiency. This transformation has implications across fields operating without stringent licensing requirements, raising new questions about ethical standards, transparency, and accountability. One of the most visible ways AI is transforming unlicensed industries is through generative media, which has had a notable impact on digital content creation. Platforms like X (formerly Twitter) rely on AI algorithms to recommend content, filter out harmful material, and label deceptive or manipulated media. AI-driven platforms now serve as the primary arenas for public discussion and information dissemination, often setting the tone for social and political discourse. Wifredo Fernandez, representing X, emphasized the platform's transparency, explaining how the company has open-sourced its recommendation algorithm to provide users insight into how content is selected and ranked. The platform also employs community-driven content verification through "Community Notes," allowing users to annotate potentially misleading information. As Fernandez highlighted, this transparency and community involvement are essential to maintaining trust and ensuring the

platform remains a credible source of information. However, as social media increasingly influences public opinion, Texas may need to consider guidelines mandating transparency from platforms in how algorithms are used to recommend, filter, or label content, ensuring these practices are aligned with ethical standards.

The expansion of general AI in content creation introduces complex ethical challenges, particularly regarding the potential for AI-generated misinformation and disinformation. Yonatan Dor, a content creator using AI to produce highly realistic, satirical videos, illustrated the ease with which AI can generate lifelike representations of public figures in various scenarios. Dor explained that while his creations are intended to be humorous, the same technology could be used to create realistic but misleading content. He advocated for invisible watermarks identifying AI-generated media, helping viewers distinguish between real and artificial content. This suggestion aligns with policy considerations that seek to mitigate the impact of misinformation. As Dor pointed out, an invisible watermark embedded in AI-generated content would provide authenticity without interfering with artistic expression. Implementing such a requirement would safeguard against malicious use of AI-generated media and support transparency, ensuring the public can easily identify AI-generated content.

AI's rise also presents potential risks in data privacy and security, particularly as more personal information is integrated into unlicensed sectors. AI systems that process data on platforms like X not only generate recommendations, but also monitor patterns of use interaction, presenting challenges related to user privacy. Fernandez noted that X has strengthened privacy protections by implementing a verification system that helps authenticate user accounts and detect inauthentic behavior. However, without formalized standards governing data use in unlicensed sectors, there is a risk that personal data may be used without adequate protection, leading to breaches of user privacy. While the Texas Data Privacy and Security Act (TDPSA) provides Texans with rights regarding their data, legislative action could implement further safeguards against unauthorized access to data.

AI's impact on unlicensed industries extends beyond media to administrative efficiency and operational optimization. Eyal Darmon of Accenture testified about generative AI's potential in modernizing legacy systems, which are often complex, costly, and cumbersome to maintain. Traditionally, upgrading these systems involved either incremental improvements or complete replacements, both of which are expensive and time-intensive. Generative AI introduces a third option: using AI to reverse-engineer legacy systems and create new specifications and designs, thereby reducing costs and development time by as much as 25%. This process not only modernizes outdated systems but also reduces operational risks by maintaining essential functionalities. Darmon emphasized that generative AI could act like "a thousand interns," creating initial drafts for everything from code to technical specifications and system requirements. However, he advised that human oversight remains essential in verifying AI-generated work, particularly as system modernization impacts public services. Policy measures could support responsible AI use by requiring contractors to disclose when generative AI is used to maintain transparency throughout a project's lifecycle, ensuring AI-driven modernization aligns with state standards for data integrity and security.

While AI provides efficiency and reach, it raises questions of accountability, especially when

dealing with unlicensed sectors that traditionally lack strict regulatory frameworks. AI's ability to produce high volumes of realistic but synthetic content challenges conventional methods of verifying authenticity. Dor underscored the necessity for legal frameworks to determine liability in cases where AI-generated media causes harm or defames individuals. He argued that AI-generated content should be treated similarly to traditional media, with creators held accountable if their work causes harm, regardless of whether it was generated by hand, software, or AI. Implementing consistent standards across media formats would ensure accountability and discourage the misuse of AI tools for malicious purposes.

Beyond technical and operational concerns, AI's role in social and cultural spaces demands attention to ethical and community values. Dr. Beena George, a professor from the University of St. Thomas Houston, outlined how AI is reshaping the way information is shared within faith-based communities, enabling constant access to religious teachings and resources. She described how a Catholic resource called Magisterium AI allows users to explore church teachings and documents, helping faith communities connect with followers. While this technology broadens access, George warned that over-reliance on AI could undermine communal aspects of faith that are fundamental to religious practice. AI can support the dissemination of information but cannot replace human connection and the shared experiences that give religious teachings their depth. Texas legislators could consider the broader social and cultural implications of AI, potentially encouraging responsible AI use in ways that uphold community values and preserve interpersonal connections.

George also highlighted the importance of transparency and accountability in AI systems, particularly in unlicensed industries where standards may be less stringent. She urged for "purpose-driven" AI that respects user data, prevents misinformation, and promotes ethical engagement, especially as younger users become more susceptible to misinformation. Her insights underscored the need for education and critical thinking skills in an AI-saturated world. With AI making information readily accessible, Texas may consider supporting educational initiatives to help individuals, especially young people, develop critical thinking skills. These skills will enable them to navigate the vast information landscape, distinguishing between accurate and misleading content.

In conclusion, AI is reshaping unlicensed industries in transformative ways, improving efficiency, creativity, and accessibility. However, as these changes unfold, Texas must establish guidelines to ensure that AI use in these industries is transparent, ethical, and accountable. Texas can position itself as a leader in responsible AI innovation, fostering an environment that supports both technological progress and public trust in AI-driven solutions.

TOPIC IV: The Impact of Artificial Intelligence and Emerging Technologies on the Licensed Industries

BACKGROUND

Artificial Intelligence (AI) is transforming licensed industries like banking, accounting, financial services, broadcasting, and public service. While AI offers clear advantages in terms of efficiency, accuracy, and security, it also raises complex regulatory, ethical, and operational challenges.

SUMMARY OF COMMITTEE ACTION

The committee held a public hearing on October 1, 2024, with both invited and public testimony. The individuals listed below provided testimony to the committee on this charge.

Public Hearing: October 1, 2024

Witness List: October 1, 2024 – Austin, Texas, Capitol Extension E2.010, at 10:00am.

1) Pranesh Aswath (Texas State University)
2) Sandra Bembenek (Self)
3) Matthew Hall (Texas State University)
4) Travis Iles (State Securities Board)
5) Shawn Main (Vantage Bank and Texas Bankers Association)
6) Shreekanth Mandayam (Texas State University)
7) Ovidio Montemayor (Self)
8) Paul Watler (Texas Association of Broadcasters)

The information below is largely based on the oral and written testimony of the individuals and organizations listed above. The Committee did not receive any written comments on this charge.

SUMMARY OF TESTIMONY

AI is proving indispensable in the banking and financial services sectors, where it enhances operational efficiency, cybersecurity, and customer service. In banking, AI-powered applications streamline processes by automating fraud detection, transaction monitoring, credit scoring, and customer support. This automation not only reduces costs but also helps banks respond swiftly to evolving financial threats. Additionally, AI enables financial institutions to deliver personalized services, such as custom financial advice and tailored product recommendations. However, the implementation of AI in these high-stakes industries demands rigorous data governance to maintain accuracy and ensure that decisions are explainable and transparent to both regulators and clients. Transparent AI applications are essential in building and maintaining public trust, especially when AI influences personal financial decisions like loan approvals and credit assessments.

In accounting, AI is revolutionizing routine tasks, reducing errors, and enhancing productivity.

Licensed professionals increasingly use AI tools to assist with tax preparation, auditing, and financial statement generation. These tools can analyze vast amounts of data, identify patterns, and generate insights at speeds that would be impossible for human staff alone. For example, AI can help automate time-consuming tasks like data entry and report generation, allowing accountants to focus on high-value activities that require professional judgment and expertise. However, while AI aids in efficiency, human oversight remains critical. Sandra Bembenek, CFO of Strickland Solutions and a member of the Texas Society of CPAs, compared AI to a "smart intern" that assists with data gathering, analysis, and repetitive tasks, allowing CPAs to focus on complex, judgment-based work. Accountants are ultimately responsible for verifying AI-generated outputs, ensuring accuracy, and maintaining the confidentiality of sensitive client data. This highlights the need for ethical standards that guide the responsible use of AI in accounting to protect client interests.

The financial services industry benefits from AI's ability to process and analyze massive datasets, optimizing investment strategies and enhancing trading efficiency. By identifying market patterns and automating routine tasks, AI helps financial institutions reduce costs and improve returns for investors. However, as AI becomes more embedded in market operations, it introduces new risks, particularly regarding market stability and manipulation. For instance, if numerous financial firms rely on similar AI-driven models, systemic risks could arise, with machines potentially responding to market signals without human judgment, leading to destabilizing effects. To mitigate these risks, Texas could consider policies that promote transparency in AI-driven trading strategies, require disclosure of AI usage in decision-making, and maintain human oversight in critical financial decisions to ensure ethical, stable operations.

In broadcasting and media, AI is both an asset and a challenge. On one hand, it aids in content generation and enhances operational efficiency. On the other hand, it introduces risks related to misinformation and content authenticity. Paul Watler, representing the Texas Association of Broadcasters, discussed the unique position of broadcasters as licensed media providers and emphasized the dangers of AI-driven misinformation. Deepfake technology, for example, allows users to create highly realistic but entirely artificial images, videos, and audio that could be used maliciously to mislead the public or harm individuals. Broadcasters are particularly concerned about unauthorized use of their content in AI models, which can erode trust and potentially damage reputations. Additionally, with the growing accessibility of AI content-creation tools, there is an urgent need for legislation to protect individuals from unauthorized use of their likenesses and to require proper attribution when AI-generated content utilizes licensed media. Establishing clear protections and disclosure requirements for AI-generated content would help safeguard the credibility of Texas broadcasters and other licensed media professionals. Watler recommended that Texas consider legislation similar to the proposed federal "NO FAKES Act," which would provide legal recourse for individuals whose likenesses are used without consent.

The role of AI in public service and regulatory compliance is also expanding, especially in areas like fraud detection, auditing, and record-keeping. Travis Iles, Commissioner of the Texas State Securities Board, described how AI could assist in identifying and preventing fraud by analyzing transaction patterns and detecting unusual behavior in financial transactions. However, Iles warned that fraudsters can also use AI to deceive investors, especially in combination with emerging technologies like blockchain. He highlighted that the rapid advancement of AI presents

challenges in identifying and prosecuting fraudulent activity, as AI-generated schemes are more sophisticated and can evade traditional detection methods. Iles advocated for ongoing training and investment in AI literacy among regulatory staff to ensure they can recognize and counteract new forms of fraud. Additionally, AI-driven compliance tools must be designed to enhance, rather than replace, the expertise of human regulators, ensuring that technology supports rather than undermines established standards.

In conclusion, AI offers licensed industries numerous benefits, from improved efficiency and enhanced customer service to advanced fraud detection and personalized client interactions. However, realizing these benefits requires a regulatory framework that addresses the ethical, operational, and privacy concerns AI introduces. Texas can lead in responsible AI use by establishing clear standards, promoting transparency, and ensuring that AI applications in licensed industries are aligned with public trust and industry integrity. Through a combination of thoughtful policy, industry collaboration, and educational support, Texas can create a sustainable AI environment that fosters innovation while safeguarding the interests of its citizens and licensed professionals alike.

TOPIC V: Formulating Legislative, Policy, and Regulatory Recommendations

BACKGROUND

As artificial intelligence (AI) becomes more integrated into society, Texas is challenged to formulate effective policies and regulatory guidelines for AI. With the rapid evolution of AI technology, the state has an opportunity to set standards that ensure the responsible use of AI, protect citizens' rights, and promote innovation. From protecting human dignity and privacy to fostering transparency and accountability, witnesses emphasized principles and specific policy approaches that prioritize ethical AI use while promoting innovation.

SUMMARY OF COMMITTEE ACTION

The committee held a public hearing on October 1, 2024, with both invited and public testimony. The individuals listed below provided testimony to the committee on this charge.

Public Hearing: October 1, 2024

Witness List: October 1, 2024 – Austin, Texas, Capitol Extension E2.010, at 10:00am

1) Ben Bhatti (Texas AI Association)
2) Zach Whiting (Texas Public Policy Foundation)

The information below is largely based on the oral and written testimony of the individuals and organizations listed above. The Committee also received written comments on this charge from Carolyn Reeves (Republican), Luis Saenz (Representing Workday), Holly Deshields (Business Software Alliance), and Ariel Santschi (self – filmmaker).

SUMMARY OF TESTIMONY

A foundational theme from the testimony was the importance of centering AI policies on human dignity and privacy. Zach Whiting, representing the Texas Public Policy Foundation, argued that technology "should serve humanity, not the other way around," urging the committee to put individuals' rights at the forefront of AI policy. This guiding principle underscores that AI should be used to enhance human well-being, not undermine it. Protecting individuals' privacy rights, particularly concerning sensitive data, was seen as essential to preserving personal autonomy.

Building on this principle, Whiting suggested a digital bill of rights, allowing Texans control over their data when interacting with AI. By granting users the right to access, correct, delete, or opt out of AI data usage, Texas can ensure that citizens maintain control over their digital presence, particularly as AI's reach extends into daily life. Witnesses also highlighted the importance of protecting minors' data, emphasizing that children deserve stronger privacy protections in an AI-driven world.

Transparency was another critical focus, as experts argued that Texans deserve to know when they are engaging with AI. Whiting emphasized that "notice is the absolute bare minimum" when AI is involved, underscoring the need for clear disclosures to maintain public trust. Many AI interactions currently occur without users' explicit knowledge, creating the potential for misunderstanding or even misuse of AI-generated outputs. Testimony recommended that companies and public entities using AI provide "conspicuous" notice to users, making it easy for individuals to identify AI involvement in decisions affecting them.

Transparency also extends to data practices. Witnesses noted that users often lack clarity on how their data is collected, processed, and potentially shared. To address this, the testimony recommended that companies provide clear documentation about data handling practices, enabling users to make informed decisions. This approach aligns with Texas' past work in data privacy, creating a natural extension for AI policy to protect citizens' rights in new digital contexts.

Accountability in AI applications was another essential theme, with the testimony suggesting that policies should emphasize compliance and ethical use rather than purely punitive measures. Witnesses argued that the regulatory framework should promote self-assessment and correction, enabling companies to rectify issues before facing penalties. Whiting proposed a "cure process" to allow organizations the chance to align with regulations, provided they act in good faith to address any non-compliance.

At the same time, testimony supported the need for meaningful enforcement to deter misuse. An effective regulatory structure would offer flexibility for companies to comply while retaining strong consequences for those who exploit AI unethically. This balance would foster responsible innovation, encouraging companies to develop AI solutions that are both effective and ethically sound.

Witnesses also highlighted the importance of clear accountability standards tailored to different players within the AI ecosystem. For instance, developers, deployers, and end-users of AI systems may require distinct regulatory obligations. Such tailored regulations could address each group's specific impact on the technology, ensuring that responsibilities are appropriately distributed.

A risk-based approach to AI regulation emerged as a compelling strategy, reflecting the fact that AI applications vary widely in their potential impacts. Testimony pointed to models from jurisdictions like the European Union, which differentiates regulations by classifying AI applications based on their associated risks. High-stakes fields, like healthcare and finance, involve significant consequences for individuals and, therefore, warrant additional protections.

Whiting explained that high-risk AI systems make decisions in areas such as "employment, financial, healthcare, housing, and legal services," impacting individuals in significant ways. Under a risk-based model, applications with potentially severe consequences would undergo greater scrutiny, while low-risk applications would face fewer regulatory hurdles. Such a framework would allow Texas to prioritize oversight for high-impact uses, promoting both public safety and market efficiency.

While AI holds promise in many areas, witnesses warned of applications that pose unacceptable

risks to society. The testimony highlighted certain uses that should be outright prohibited, such as AI applications that manipulate human behavior or exploit vulnerable populations. Technologies like untargeted facial recognition and emotion recognition in sensitive environments – such as schools and workplaces – were viewed as invasive and potentially harmful.

Another specific concern was the use of AI to create malicious or exploitative content, such as deepfakes that impersonate individuals without their consent. Testimony called for banning applications that misuse AI to create realistic but misleading digital representatives, especially in ways that could harm reputations or public trust. These prohibitions would help Texas draw clear ethical lines, preventing AI applications that could infringe on individual rights or harm the social fabric.

Enforcement mechanisms were a key focus, with experts recommending a centralized approach through the Texas Attorney General's Office to streamline compliance oversight. Whiting argued that the Attorney General's Office could oversee AI regulations under deceptive trade practices laws, leveraging existing frameworks to enforce responsible AI use effectively. This approach would simplify enforcement, ensuring that consumers have a straightforward path for recourse if harmed by AI applications.

In addition to centralized oversight, witnesses encouraged regulatory flexibility to keep pace with AI's rapid development. Texas could support enforcement through self-regulatory standards, allowing companies to certify their compliance with industry best practices. Testimony suggested that this flexibility would allow regulators to adapt to AI's dynamic nature while providing companies with clear guidelines for ethical implementation.

An equitable AI future requires that technology be accessible to organizations of all sizes, from major corporations to small businesses. Testimony revealed a disparity in AI access, with larger firms more readily adopting advanced AI tools. Ben Bhatti, representing the Texas AI Association, spoke on the importance of bridging this gap by creating public-private partnerships that connect small and mid-sized businesses with scalable AI solutions. Such efforts would ensure that Texas businesses of all sizes benefit from AI's potential to improve efficiency and productivity.

Witnesses also advocated for educational initiatives to prepare Texas' workforce for an AI-driven economy. University programs and workforce training in AI were crucial steps for equipping students and professionals with essential skills. By partnering with educational institutions, Texas could ensure a workforce ready to navigate and innovate within the AI landscape, fostering a future where Texans across various industries can thrive in technology-enhanced roles.

The testimony provided a thoughtful roadmap for Texas to lead in AI policy, balancing the need for innovation with public protection. Texas can develop a framework that serves both the public interest and the technology sector by prioritizing human dignity, transparency, accountability, and a risk-based regulatory approach. Updating the Texas Data Privacy and Security Act, fostering transparency in AI use, and creating flexible compliance standards will promote responsible AI development across industries.

CONCLUSION

The insights provided through expert testimony in the committee's April 29, 2024, and October 1, 2024, hearings underscore both the transformative potential and the significant risks associated with AI integration across Texas' public and private sectors. AI holds promise for enhancing efficiency, improving services, and fostering innovation in areas such as healthcare, transportation, financial services, and public safety. AI has already become deeply woven into everyday life, influencing tasks from traffic navigation to personalized recommendations. However, AI's rapid adoption brings challenges that require immediate legislative attention to ensure responsible deployment, safeguard individual rights, and prevent misuse.

Fundamental principles emerged from the testimony to guide AI regulation, including the importance of human dignity, transparency, accountability, and risk-based governance. AI must serve humanity with safeguards that protect privacy, autonomy, and control over personal data. Transparency is crucial, as Texas citizens deserve to know when and how AI impacts them, whether in their financial decisions, health outcomes, or online interactions. Requiring explicit disclosure of AI's involvement in decision-making processes can help foster informed and ethical engagement with technology, building public trust.

The testimony also highlighted the need for a risk-based regulatory approach to tailor regulations to specific applications. High-risk uses of AI – such as those in defense, elections, and healthcare – warrant stricter oversight and additional protections. In military contexts, for example, expert testimony emphasized the importance of keeping human oversight in AI-powered systems. Meanwhile, less invasive applications can benefit from flexible guidelines that promote innovation without imposing excessive business restrictions. This risk-based approach allows Texas to address AI's diverse applications appropriately, focusing regulatory attention on areas with the most significant potential for harm.

Concerns about data bias and transparency in AI training were prominent themes in the testimony, as these issues are foundational to the fairness and reliability of AI systems. Experts highlighted that AI models trained on biased or non-representative data can perpetuate existing societal biases, leading to unequal outcomes across different demographics. Testimony underscored the need for transparent data practices, calling AI developers to disclose data sources and ensure that training datasets represent diverse populations. This transparency can help mitigate biases and promote equitable results, particularly in high-stakes applications like healthcare, hiring, and financial services. Addressing data bias and enhancing transparency in AI training are critical steps to fostering public trust and ensuring AI systems operate fairly across all sectors.

Moreover, educational initiatives are essential for preparing an AI-literate workforce that is equipped to manage AI technologies responsibly. By fostering partnerships with education institutions, Texas can ensure its citizens are prepared to thrive in an AI-driven future, filling critical roles across industries.

In sum, the insights gathered from this testimony provide Texas with a roadmap for responsible AI governance. By implementing policies that prioritize public welfare, uphold transparency, and promote ethical standards, Texas can set a national example for thoughtful regulation. The

legislative recommendations that follow are rooted in this testimony, offering practical steps to protect Texas' citizens and ensure that AI serves as a beneficial and accountable tool across the state.

RECOMMENDATIONS

Examining the current state of AI/ET and its uses by public and private actors in modern society:

RECOMMENDATION 1: Establish a comprehensive AI inventory for public agencies, requiring all Texas state agencies to conduct an annual audit of AI systems currently deployed, identifying their functions, data sources, and any potential risk of bias or misuse.

RECOMMENDATION 2: Develop AI-specific training for public sector employees, focusing on responsible AI use, data privacy, and bias mitigation in decision-making processes.

RECOMMENDATION 3: Mandate risk assessments for high-risk AI deployment by public and private actors, requiring a documented impact assessment evaluating the system's potential societal and legal effects.

RECOMMENDATION 4: Implement transparency standards for high-risk AI in the private sector, mandating disclosure requirements and transparency around data sources and algorithmic decision-making processes.

Determining the impact of the application of AI/ET on various sectors of society, including employment, healthcare, homeland and national security, and transportation:

RECOMMENDATION 5: Create AI workforce development programs prioritizing training for workers at risk of displacement due to automation.

RECOMMENDATION 6: Provide upskilling training for workers in preparation for the implementation of new technologies.

RECOMMENDATION 7: Encourage employers to provide transition programs for AI-displaced workers, incentivizing the offer of retraining.

RECOMMENDATION 8: Require transparency in AI by requiring the disclosure of the type of data used to program an AI system.

RECOMMENDATION 9: Establish AI risk monitoring for high-risk AI systems used in consequential decisions.

RECOMMENDATION 10: Develop standards for human oversight, ensuring AI systems used in high-risk situations operate with meaningful human control.

RECOMMENDATION 11: Collaborate on AI security standards with federal entities, such as the National Institute of Standards and Technology.

RECOMMENDATION 12: Implement protections for the use of copyrighted data and unauthorized use of a person's likeness.

Identifying policy considerations necessary to ensure the responsible deployment of AI/ET in Texas by both public and private actors:

RECOMMENDATION 13: Establish an Advisory Council to provide subject matter assistance to state agencies implementing regulatory guidance for licensed industries under their purview.

RECOMMENDATION 14: Create a regulatory sandbox to allow innovation to thrive outside standard regulations.

RECOMMENDATION 15: Require disclosure of the use of AI to consumers in high-risk AI interactions.

RECOMMENDATION 16: Require AI systems to include measures that reduce bias and prevent algorithmic discrimination. AI system developers should be required to certify their systems as free from biases based on race, gender, or other protected categories before deployment.

RECOMMENDATION 17: Strengthen laws to address emerging digital threats, including deep fake technology, election interference, revenge porn, and child sexual abuse material.

RECOMMENDATION 18: Establish strict unacceptable uses of AI that intrude on privacy, exploit vulnerable populations, manipulate individuals, or misuse sensitive data.

RECOMMENDATION 19: Evaluate and update laws to assign clear liabilities for AI-related outcomes, ensuring accountability for developers, deployers, and users of AI systems.

RECOMMENDATION 20: Make necessary adjustments to the Texas Data Privacy and Security Act to include AI and emerging technologies.