Testimony of Denzel Wilson, Grassroots Program Manager, SeedAI

Before the
U.S. Senate Health, Education, Labor, and Pensions Committee
Subcommittee on Employment and Workplace Safety
Hearing on "Reading the Room: Preparing Workers for AI"
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Chairman Hickenlooper and Ranking Member Braun,

Thank you for inviting me to testify today before the subcommittee. My name is Dezel Wilson, and I am the Grassroots Program Manager for SeedAI. I am grateful for the opportunity to speak on this critically important topic of preparing the American workforce for AI.

SeedAI is a non-partisan, non-profit organization that works at the forefront of artificial intelligence policy and governance, collaborating with policymakers, scientists, academics, and the private sector to design policies, programs, and tools to ensure AI benefits all Americans.

Ensuring that AI benefits Americans does not just mean that Americans can access the latest technologies. It means giving Americans the tools to participate in the development of AI, to harness the potential of AI for their empowerment, to democratize access to the skills necessary to make AI work for them, and to expand economic opportunities for new students and existing members of the workforce alike.

This topic is a personal one for me. I grew up in Kankakee, IL, a county outside of Chicago, where opportunities were scarce and career options were limited. Outside of football, technology was my passion growing up. Over the years, I witnessed firsthand how the steady evolution of technology was transforming the world around me and how the rise of AI has created so many unanswered questions in our world today. I am grateful to be a part of what some call the "Fourth Industrial Revolution," working to tap into our human instinct for innovation to ensure we create the necessary infrastructure, partnerships, and policies so that AI serves the needs of the many, not just the few.

I'd like to highlight three things in my testimony today:
1. How my personal journey illustrates what is possible when we prioritize expanding access to the tools necessary to prepare students and workers for AI
2. SeedAI's grassroots work provide AI skills to students across the country
3. How SeedAI is working to ensure all Americans can benefit from AI

1. My Journey

I always harbored a deep passion for technology and sports. However, after graduating high school, I faced several obstacles that led me on an unexpected path. Eventually, I found myself in Houston, Texas, working in the oil and gas industry. When COVID-19 hit, I was laid off, but this setback sparked a pivotal career change. In the fall of 2020, I decided to pursue my interest in artificial intelligence by joining the AI program at Houston Community College (HCC).

While at HCC, I immersed myself in the field by joining the Computer Science Association to find community during the pandemic. My dedication was recognized when I received the Pepsico Uplift Scholarship and was named President of the Computer Science Association club. Driven by a desire to create opportunities for others, I worked with a group of hungry students and faculty to initiate the HCC AI & The Future Conference, which has since evolved into the Gulf Coast Conference on Artificial Intelligence. My efforts culminated in becoming the first graduate of HCC's Associates in Applied AI Degree—a first not just for the college but for the entire state of Texas.

This achievement, winning the Intel Global AI Festival National competition, and presenting the project to Intel CEO Pat Gelsinger, paved the way for my current role at SeedAI, which I joined in 2023.

2. Grassroots Work with SeedAI

My grassroots work at SeedAI has revealed key lessons about how we should think about better preparing the American workforce for AI. First, students from community colleges, Historically Black Colleges and Universities (HBCUs), and other underrepresented demographics are hungry and capable of harnessing the power of AI to their advantage. Second, when presented with new perspectives and opportunities, students from these demographics thrive in environments that require resourcefulness and creativity.

Enabling greater participation in AI means more than just making the technology perform more effectively for diverse populations. It means ensuring that the trajectory of the technology bends towards the needs of the many, not the few, and that all Americans can have a hand in shaping the future of AI.

Hack the Future
Hack The Future (HTF), a flagship initiative of SeedAI has made significant strides in engaging students and technology enthusiasts across the nation. To date, we have successfully hosted nine Hack The Future events, each designed to inspire and educate participants about the potential of AI and emerging technologies. These events have collectively reached over 250 students, providing them with hands-on experience and valuable insights into the world of technology and innovation.

Our impact extends beyond traditional educational settings. At DEFCON 31, the world's largest hacker convention, our HTF event engaged over 2,200 users, showcasing the broad appeal and relevance of our program. We've also organized specialized events such as Hack The Future: Greenwood, in collaboration with Black Tech Street and the White House Office of Science and Technology Policy, and Hack The Future @ SXSW 2024, where we facilitated the participation of 47 students from Houston Community College, the University of Houston, and Texas Southern University. Other notable events include Hack The Future Cleveland, which partnered with Case Western University and JOLTI Law Journal, and Hack The Future: Atlanta, collaborating with the Dream Machine. Looking ahead, we're excited to announce our tenth event, scheduled for October 11 in Houston, continuing our mission to democratize access to AI education and opportunities.

Public AI Red-Teaming

Red-teaming has been a key tool in security research for decades and typically requires specialized skillsets.[1] But this does not have to be the case with AI. With large language models, where the interface is typically plain language, the barriers to participating in red-teaming are dramatically lower. And when it comes to identifying shortcomings in model performance, the larger and more diverse cohort red-teaming a model, the better.

SeedAI saw this as an opportunity to pilot the idea that modern AI opens up opportunities for broad, diverse, and relatively unskilled folks. In early 2023, SeedAI began working with cybersecurity and AI experts at Humane Intelligence, the AI Village, the White House Office of Science and Technology Policy, the National Science Foundation, and the Congressional AI Caucus to set our sights on an ambitious, large-scale public red-teaming event at the AI Village at DEF CON 31.[2]

As something like this had never been done before, SeedAI got to work to design what a public AI red team would actually look like in practice. SeedAI held the first pilot of a competitive AI red-team with Houston Community College students at South by Southwest in March 2023.[3] SeedAI then hosted a second pilot at Howard University in June to teach Howard students how to expose bias, potential harms, and security vulnerabilities in generative AI models.[4] With DEF CON scheduled for just a few weeks away in August, SeedAI and our partners secured the participation of Anthropic, Cohere, Google, Hugging Face, NVIDIA, OpenAI, and Stability to provide model access to red-team participants.

With all of the major AI players involved, the AI red-team at DEF CON ended up being the largest ever generative AI red-team (public or private) by an order of magnitude with 2,244

[1] https://cset.georgetown.edu/article/what-does-ai-red-teaming-actually-mean/
[2] https://www.hackthefuture.com/news/ai-village-at-def-con-announces-largest-ever-public-generative-ai-red-team
[3] https://www.youtube.com/watch?v=nida-w1J9r4
[4] https://www.hackthefuture.com/news/hack-the-future-at-howard-university

participants.[5] SeedAI and community partners Black Tech Street and Houston Community College also brought 220 students & entrepreneurs from Tulsa, HBCUs, and community colleges to DEF CON to join in. Our goal was to ensure that the exercise would create a pathway for people from all walks of life to participate in shaping AI while demonstrating that including more diverse perspectives in red-teaming makes AI more resilient, reliable, and trustworthy for all Americans.

The lessons learned from the DEF CON AI red-team highlight that public red-teaming – while not replacing the need for robust internal testing and evaluation practice – is a valuable addition to the broader AI safety landscape and can shine greater light on harms related to demographics and lived experiences.[6]

While red-teaming is a natural entry point for greater participation in AI, policymakers, industry, academia, and civil society should seek to lower barriers to public participation in AI through as many domains as possible.

Microgrants for Direct Student Empowerment

As part of our mission to democratize access to artificial intelligence education and opportunities, SeedAI has implemented a robust microgrant pilot program to fill gaps we saw in the AI skills landscape. This initiative explicitly targets students and clubs at community colleges, HBCUs, and other minority-serving institutions across the United States. The program aims to provide crucial financial support to those who might otherwise lack access to resources in the rapidly evolving field of AI.

In a significant step towards realizing this goal, SeedAI forged formal partnerships with nine community colleges and universities. These partnerships create pathways for students to access a wealth of opportunities and resources in the AI domain. To date, SeedAI has distributed over $90,000 in microgrants across nine educational institutions, directly investing in the future of AI education and ensuring that a diverse range of students can participate in and contribute to the AI revolution.

The goal of these microgrants is to pilot a new model for lifting up students by lowering barriers to accessing AI skills. We are incredibly proud of this work, but we recognize that this is not a long term solution to addressing the needs of students across the country – to ensure we can reach as many people as effectively as possible, we are shifting our efforts to support national consortia. As we work with other groups and initiatives to scale our impact, we will continue to iterate on and prioritize the microgrants program and bring the lessons we learn to inform \work on the national stage.

3. Ensuring AI Benefits All Americans

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[5]
https://www.forbes.com/sites/thomasbrewster/2023/05/04/biden-white-house-backs-biggest-ai-hacking-event-with-google-and-chatgpt/
[6] https://drive.google.com/file/d/1JqpbIP6DNomkb32umLoiEPombK2-0Rc-/view

SeedAI works to ensure that everyone across the geographic and economic spectrum–not just a select few–can influence and benefit from transformative AI technologies. We believe that this will lead to a fairer society, better AI policy, and a more robust and diverse workforce, enabling the United States to maintain its leadership position in driving technological innovation.

Expanding access to AI opportunities and preparing the American workforce for AI will be critical to America's AI competitiveness overall. Currently, the AI talent is concentrated in a handful of companies primarily located in Silicon Valley, and many talented researchers, workers, and entrepreneurs do not have access to the basic infrastructure and resources they need to develop and test their ideas and apply AI in their careers.

Infrastructure
Lowering the barriers to acquiring AI skills is just one piece of this puzzle - skills alone will only go far. We need to invest in creating the infrastructure so that all who wish to can access the computational and data resources, testbeds, software, and tools necessary to meaningfully engage and co-create with AI. This infrastructure is what will enable us to move beyond just providing workers with access to AI to actually democratizing participation in shaping the technology.

To that end, SeedAI has strongly supported the creation and complete funding of the National AI Research Resource (NAIRR). The NAIRR pilot, launched in January 2024, is a proof-of-concept for the eventual full-scale NAIRR, which will create national infrastructure to connect U.S. researchers with the compute, data, and tools necessary to conduct valuable AI research. The NAIRR pilot is led by the National Science Foundation in partnership with 12 other federal agencies and 26 non-governmental partners – an excellent example of the kind of public-private partnerships we desperately need to create the robust public infrastructure necessary for large-scale participation in AI.

Research from the NAIRR can be a powerful foundation of technology that can be applied and tested by people around the country. However the NAIRR itself is not yet fully funded. The bipartisan CREATE AI Act would formally authorize the creation of the NAIRR, which is a critical first step.[7] To be fully effective, The NAIRR Task Force estimated that the NAIRR will require $2.6 billion over a six-year period.[8]

The National Applied Artificial Intelligence Consortium

In 2021, NSF Director Sethuraman Panchanathan laid out a vision for the future of science in the U.S. that tapped into the "missing millions" - people who are capable of succeeding as scientists and engineers but do not have access to pathways that lead into those careers.[9] We believe community colleges are the key to unlocking these pathways.

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[7] https://www.congress.gov/bill/118th-congress/senate-bill/2714
[8] https://www.ai.gov/wp-content/uploads/2023/01/NAIRR-TF-Final-Report-2023.pdf
[9] https://www.aaas.org/news/nsf-director-lays-out-vision-future-us-science

This is why SeedAI is proud to partner with the National Applied Artificial Intelligence Consortium (NAAIC), an initiative launched by Miami Dade College (MDC) in partnership with Houston Community College (HCC) and Maricopa County Community College District (MCCCD). The Consortium's mission is closely aligned with SeedAI's goals of ensuring broad participation in AI development and governance by building local AI hubs and engaging diverse communities. The founding schools all received microgrants from SeedAI in 2024.

The Consortium is a game-changer, not just for community colleges, but for the entire AI-driven economy. Applied AI skills are the key to unlocking the benefits of fundamental AI advancements, as well as well-paying jobs and sustainable careers for all Americans. We can have all the AI research in the world, but it doesn't make a difference if we don't have communities prepared to apply the technologies to the benefit of everyday Americans.

Tulsa Hub for Equitable & Trustworthy Autonomy
To that end, SeedAI is proud to support the Tulsa Hub for Equitable & Trustworthy Autonomy (THETA), which was recently awarded $51m by the U.S. Economic Development Administration (EDA).[10] SeedAI will work with Black Tech Street to provide strategic guidance and capacity building for the AI/AS Program for Innovation, Research, and Education (ASPIRE) initiative. This includes procuring high-performance computing resources and organizing underlying projects for community benefit.

We view partnerships like the Tulsa Hub and the NAAIC as critical "last-mile" components of the NAIRR. These partnerships address the critical need to ensure that research from the NAIRR can be co-developed and leveraged by communities across the country.

Legislation to Increase Participation in AI

SeedAI also supports bipartisan legislation like the Expanding AI Voices Act, which aims to diversify AI research and workforce development.[11] This bill would support capacity-building in Minority Serving Institutions (MSIs), HBCUs, and Tribal Colleges. By expanding the National Science Foundation (NSF)'s ExpandAI program, the act ensures that the future of AI is inclusive and representative of all communities.

Another is the bipartisan Workforce for AI Trust Act, which aims to develop a multidisciplinary workforce that can advance the creation and deployment of safe, fair, and transparent artificial intelligence systems.[12] These proposals can leverage the lessons from work like ours for the broad benefit of Americans.

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[10]
https://www.eda.gov/funding/programs/regional-technology-and-innovation-hubs/2023/Tulsa-Hub-for-Equitable-Trustworthy-Autonomy
[11] https://www.congress.gov/bill/118th-congress/house-bill/9403/text/ih
[12] https://www.congress.gov/bill/118th-congress/house-bill/9215/text

Conclusion

There is both incredible appetite and untapped potential in American workers and students across the country to participate in and benefit from AI. SeedAI is eager to work with members of this subcommittee to help realize the vision of preparing the American workforce for AI and leverage the lessons we've learned from working with students across the country. There are several key opportunities we think would help make this happen as fast and as equitably as possible.

First, we are eager to continue expanding our Hack the Future program to serve communities in your states and across the country. Please don't hesitate to reach out if that's of interest.

Second, we strongly support passage of the CREATE AI Act to authorize the NAIRR, and support its full funding of $2.6 billion a year for six years. We also support passage of the bipartisan Expanding AI Voices Act and the Workforce for AI Trust Act. The development and application of AI is an ecosystem, and we need to support each critical component.

Third, as one of the first graduates with an Associates Degree in Applied AI, I encourage members of the subcommittee to explore opportunities to eliminate counterproductive education requirements for entry level jobs related to AI. Skills are what matter, and creating programs to cultivate these skills in the American workforce only go so far when many jobs require four-year degrees that prevent qualified workers from accessing these opportunities.

And fourth, most importantly, we encourage the subcommittee to leverage its power of attention. Progress on this topic requires robust public private partnerships and tapping all stakeholders in the government, industry, and academia to make changes to facilitate greater participation in and access to AI opportunities.

By promoting these opportunities where they exist, incentivizing their creation, and providing them with the resources and infrastructure they need to be successful, we can transform the AI ecosystem to be one that is more inclusive and participatory, more geographically diverse, and more beneficial for all Americans.