

Chairman Tuberville, Ranking Member Rochester, members of the Subcommittee — thank you for the opportunity to testify today.

I'm Joshua Jones, CEO of QuantHub, an Alabama-based company that builds AI and data literacy curriculum for schools, universities, and employers. We are a DARPA award recipient through the TOOLS Competition. For the past four years, we've partnered with the Alabama State Department of Education on what I believe is one of the most ambitious statewide efforts in the country to prepare K-12 and postsecondary learners for an AI-driven economy.

Alabama is not a state most people associate with leading-edge tech education. That's part of why what's happened there matters. In its recent "State of the Field Report," The national Data Science 4 Everyone initiative ranked Alabama third in the nation in student enrollment in data science courses — behind only California and Virginia. Through QuantHub's efforts, we've placed 100 high school and undergraduate students into paid data and AI internships through our Data Scholars program. Teachers and administrators have earned thousands of professional development hours. Students are earning industry-recognized credentials in data and AI literacy before they leave high school. As Alabama State Superintendent Dr. Eric Mackey has put it, integrating this kind of training into the state's educational framework is about preparing students for the future of work while keeping Alabama competitive in a rapidly evolving digital economy.

I'd like to share three lessons from this work that I believe are directly relevant to federal policy.

First, it is imperative that standards and curriculum accelerate to move at the speed of the technology. The traditional curriculum cycle can range from 5 to 10 years. In AI, that is generations. At QuantHub, we built a human-in-the-loop system that uses AI agents for content generation but always validates with instructional designers, faculty, and subject matter experts before anything reaches a student. We've reduced curriculum development from roughly 200 hours per module to about six hours of expert validation — a twenty-fold improvement — without compromising rigor or accuracy. In the interest of sharing these advancements with the education community, we published our process in the *Journal of Applied Instructional Design*.

Federal investments in workforce curriculum should reward speed and update cadence, not just initial development, learner hours or page counts.

Second, the human side is where this work succeeds or fails. For years, data and analytics courses lived on the fringes as obscure electives. The breakthrough in Alabama was not a better course. It was building modular content that maps directly to existing state standards in math, science, social studies, and CTE — so a teacher doesn't have to add a class, they integrate a unit into the one they already teach. That requires heavy investment in teacher training, instructional coaching, and integration

support. Curriculum is a small piece of the puzzle. Change management is the critical linchpin.

Third, you cannot build a workforce pipeline from inside a school building alone. Our Data Scholars internship program works because we built bridges to employers, civic leaders, non-profits, and higher education partners, and matched students to real, paid roles. More than fifty employers now host our Scholars. In work-based learning, recruiting employers at that scale is typically the hardest part of the program – which makes the number itself a strong signal that this talent is in real demand. It also gives us a continuous feedback loop that keeps the curriculum aligned with what employers actually need. The micro-credentials our Scholars earn are aligned directly with Alabama's state talent marketplace, *Talent Triad* – so a credential isn't just a certificate, it plugs into the system employers actually use to find workers. The pilot for the internship program was originally funded by a state innovation agency, called Innovate Alabama, and has been recognized as a model for rural talent retention. This matters enormously in a state, and a country, where small towns are losing young people to larger metros. A hundred placements on limited funding tells us this model scales. With dedicated federal support – particularly through Perkins V and existing workforce pathways – it can be replicated in any state.

In closing, I'd respectfully offer three recommendations for the Subcommittee's consideration:

One – fund curriculum infrastructure that can be updated continuously, not just developed once. Refresh rates should happen in semesters, not quadrennium or decades.

Two – weight teacher training and classroom integration at least as heavily as content creation in federal workforce education grants.

Three – expand support for paid, work-based learning in AI and data fields, starting in high school.

The Alabama model is replicable. It is not expensive relative to what it returns. And it works because we treated this as a workforce problem, an educator problem, and a curriculum problem – not just a technology problem.

Thank you. I welcome the Subcommittee's questions.