



BI-FS-001 | FOUNDING STORY | REVISED EDITION

The Origin of The Bertrand Institute

Where Workforce Need Met Human Potential

A Founding Story by Jordan Bertrand and Noemi Valdez

PREPARED FOR LEADERSHIP AND STAKEHOLDER DISCUSSION
THE BERTRAND INSTITUTE | 2026

PUBLICATION PURPOSE

Why this statement exists

The Bertrand Institute began where three realities met: industry urgently needs people who can build, power, cool, connect, maintain, and protect the infrastructure behind artificial intelligence; many capable young people need a more active, meaningful way to discover what they can do; and human understanding, judgment, and governance must advance alongside increasingly capable AI.

FOUNDING
PREMISE

When students are trusted with meaningful work, they can discover purpose and pride while developing the skills needed to build the future.

Use of this publication

This founding story is intended to support conversations with education leaders, public officials, employers, workforce organizations, foundations, and technology and infrastructure executives. It explains the complementary industry, student-centered, and human-governance concerns that drove the Institute's development.

Publication note

This document reflects the personal experiences and recollections of Jordan Bertrand and Noemi Valdez. References to a major U.S. oil and gas company, contractors, clients, schools, educators, or industry activity are provided only as background to the co-founders' development of the Institute. No endorsement, sponsorship, partnership, diagnosis, clinical claim, or institutional position by any referenced company, school, or individual is stated or implied.

The proposition in one sentence

America should introduce students earlier to meaningful, hands-on learning about AI and critical infrastructure so more young people can discover their abilities, develop pride in their work, and gain the understanding needed to help govern the systems they will inherit.

THE INDUSTRY PERSPECTIVE

The workforce reality behind the mission

The idea for The Bertrand Institute did not begin in a conference room or as a theoretical education proposal. It developed from what I observed while working in industry.

While working with a major U.S. oil and gas company, I joined the ACE Team and became involved with portions of AI-related development supporting operations in the Gulf of America. That experience introduced me to the networking, infrastructure, energy, and service systems required to support artificial intelligence.

It changed the way I understood AI.

I began to recognize that AI is not powered by software alone. Every AI system and data center depends upon electricity, cooling, networks, controls, construction, maintenance, energy production, and a highly capable technical workforce. Behind every advanced digital system is an enormous physical infrastructure built and maintained by electricians, HVAC technicians, instrumentation specialists, network professionals, engineers, operators, and skilled craftspeople.

The urgency became clearer through conversations with contracting-company representatives supporting industrial operations. I began asking which skilled crafts were in the greatest demand and which positions were becoming the hardest to fill.

One contractor told me that data-center clients had requested approximately 200 electricians from the company. At the same time, the contractor could not provide even five electricians requested for our oil and gas operations.

That conversation stayed with me.

It showed me that energy companies, data centers, manufacturers, construction projects, and other critical industries were competing for the same limited workforce. It also showed me that the growth of AI would increase demand not only for programmers and computer scientists, but for the people responsible for building, powering, cooling, maintaining, and protecting the physical systems that make AI possible.

THE STUDENT PERSPECTIVE

The conversation that made the mission human

The workforce need explained what America must prepare for. A conversation with Noemi Valdez, co-founder of The Bertrand Institute, helped define whom the Institute must be prepared to reach.

Noemi shared her experience working with young people who were frequently described by the problems they caused at school. Some struggled to sustain attention, remain seated, or comply with the expectations of a traditional classroom. Their behavior could make it easy for adults to see disruption before seeing the person.

Her perspective changed when she took time to listen.

By lending an ear to a student and seeking to understand what was happening beneath the behavior, she saw a different young person emerge. Compassion did not mean lowering expectations. It meant establishing enough trust for the student to feel heard, regain a sense of dignity, and begin responding differently.

***A student who appears disengaged may not lack intelligence or potential.
The student may not yet have encountered work that feels relevant,
active, and worth owning.***

That insight deepened our discussion about education. Students with attention challenges or different learning needs may struggle when learning is experienced primarily as sitting at a desk, absorbing material, and preparing for a distant college pathway. Some of those same students may become intensely engaged when they can build, troubleshoot, test, create, work with a team, and see the result of their effort.

Hands-on learning can give a young person something concrete to contribute. Completing a circuit, diagnosing a cooling problem, programming a control, assembling a system, or presenting a team solution can turn an abstract lesson into visible accomplishment. That accomplishment can become pride; pride can strengthen belonging; and belonging can give a student a reason to want to return to school.

The Institute is not intended to diagnose students, replace special-education services, or suggest that one model will work for everyone. It is intended to expand the ways students can encounter rigorous learning and demonstrate capability, while working alongside educators, families, counselors, and existing support systems.

FROM OBSERVATION TO INSTITUTION

One Institute, three founding insights

Together, these experiences formed the central logic of The Bertrand Institute.

Jordan Bertrand's industry experience revealed a rapidly widening need for electricians, HVAC technicians, controls specialists, network professionals, engineers, operators, and responsible AI leaders. Noemi Valdez's student-centered experience revealed how many capable young people could be reached through trust, relevance, active participation, and the opportunity to produce something they can see and value.

A third concern gave the mission greater urgency: artificial intelligence is advancing faster than many educational, workforce, and public institutions can adapt. Whether or not society ultimately reaches what some describe as technological singularity, increasingly capable AI systems will influence nearly every major industry and critical infrastructure network.

We began asking a larger question: Why do we wait until students are preparing to graduate before introducing them to these systems and opportunities?

By that point, many young people have already made important academic and career decisions without understanding the industries, technologies, and skilled professions shaping their future.

The Bertrand Institute was developed in response to that gap.

Its purpose is to introduce students in grades 6-12 to the complete system: energy, electrical infrastructure, HVAC, engineering, networking, skilled trades, aerospace, artificial intelligence, leadership, safety, and public responsibility.

The goal is not to direct every student toward the same career or to diminish college preparation. It is to broaden preparation by connecting academic knowledge with technical practice, career awareness, leadership, and visible accomplishment. Students should be able to understand how modern systems work, recognize where their abilities may fit, and begin developing the knowledge, judgment, and confidence needed to contribute.

Students should not have to wait until adulthood to begin understanding the technologies and infrastructure that will define their generation. They should have the opportunity to learn early, progress deliberately, and develop alongside those systems.

ENERGY	Generation, distribution, reliability, and the systems that power modern life
INFRASTRUCTURE	Electrical, HVAC, controls, construction, networks, operations, and maintenance
AI & DIGITAL SYSTEMS	Responsible AI, data, automation, cybersecurity, and accountable human judgment
LEADERSHIP	Safety, ethics, communication, teamwork, service, and public responsibility

THE GOVERNANCE IMPERATIVE

Human capability must advance with artificial intelligence

Humanity cannot answer accelerating AI by attempting to compete with machines through speed alone. The enduring human advantage must come from understanding, adaptability, ethical judgment, leadership, and the ability to see how complex systems affect people and society.

That understanding cannot begin with AI as an isolated software subject. Students should learn how energy, electrical systems, data centers, communications, HVAC, manufacturing, transportation, cybersecurity, and public policy work together to support, secure, and govern it.

If young people first encounter these interconnected systems after high school, society risks remaining reactive. Beginning earlier allows knowledge to develop progressively, giving future technicians, engineers, educators, policymakers, and civic leaders the foundation to question AI outputs, recognize when systems exceed their intended purpose, establish responsible boundaries, and preserve meaningful human oversight.

The Institute therefore seeks to prepare students for more than jobs created by artificial intelligence. It seeks to help prepare a generation capable of building, operating, securing, governing, and, when necessary, restraining the systems that will increasingly shape society.

We cannot govern systems we do not understand, and we cannot wait until adulthood to begin building that understanding.

**STRATEGIC
POSITION**

The faster technology advances, the earlier society must develop the human knowledge, judgment, and responsibility required to guide it.

AN INVITATION TO LEADERS

The discussion the Institute is seeking

The Institute is not asking leaders to accept a finished answer. It is inviting them to help shape a disciplined, measurable response to a workforce challenge that crosses education, energy, technology, construction, manufacturing, and public policy.

- What workforce capabilities will AI infrastructure require over the next ten to twenty years?
- How can students encounter those systems early without narrowing their future choices?
- How can hands-on, project-based pathways improve engagement while maintaining rigorous academic expectations?
- How can educators better recognize ability in students whose attention or behavior may conceal their potential?
- How should schools, employers, colleges, universities, apprenticeship programs, and public leaders share responsibility?
- What can be tested through one bounded Texas pilot before any broader expansion is considered?
- How do we ensure that technical capability develops alongside safety, ethics, service, and accountable leadership?
- How do we develop the human understanding needed to govern AI before its capabilities outpace institutional readiness?

THE REQUEST

Informed feedback, introductions to the right leaders, and participation in designing one credible pilot partnership.

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