Thabo Ibrahim Traore

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EDUCATION

Bachelor of Science, Computer Science Expected May 2027
Alabama Agricultural and Mechanical University | Huntsville, AL GPA: 4.00/4.00

Relevant Coursework: Calculus II, Data Structures and Algorithms, Quantum Computing, Web Development, Data Science, Arduino, Advanced Programming, Intro to Digital Logic Design

HONORS & AWARDS

1st Place – HBCU Smart Cities Challenge (2025), JPMorgan Data for Good Hackathon (2025), AABE Energy Hackathon (2024)
2nd Place – FICO Analytics Challenge (2025), Mastercard x AUC Data Challenge (2024), Innovate Alabama Hackathon (2025)
3rd Place – Disney Innovation Challenge (2024), Innovate Alabama Hackathon (2024), 30-Second Elevator Pitch (2024)
Favorite Poster – STEM Day (2025), **Ray Greenly Scholar** – NRF Foundation (2025)
Turnitin BlackSource Scholar (2024), Presidential Gold Medallion (2025), **Finalist** – RAISE 25 AI Competition (2025)

PROFESSIONAL SKILLS

Languages: Python, Java, C#, C++, OCaml, JavaScript, TypeScript, SQL, PHP, HTML, CSS
Frameworks & Libraries: React, Node.js, Express.js, Pandas, PyTorch, NLTK, Selenium, Tailwind, Bootstrap, Flask, OpenCV
Tools: Git, GitHub, VS Code, Visual Studio, Canva, Figma, Google Colab, Postman, Anaconda, Codelite, ArcGIS

EXPERIENCE

Teaching Assistant January 2024 - Present
Alabama Agricultural and Mechanical University | Huntsville, Alabama
- Support 40+ students each semester through labs, office hours, and debugging sessions to strengthen programming fundamentals.
- Partner with faculty to improve course materials, which contributed to a 15% boost in final exam averages.
- Create supplemental practice problems to address common conceptual challenges identified during student consultations.

Software Engineering Intern May 2025 – August 2025
Microsoft | Redmond, Washington
- Developed a poison artifact validation system in Azure, preventing unsafe build deployments and improving rollout safety.
- Built PowerShell cmdlets, REST APIs, and backend logic to enable artifact marking, enforcement, and audit logging.
- Delivered a production-ready solution adopted by multiple teams, reducing deployment risk and ensuring compliance.

Software Engineering Intern May 2024 - August 2024
Meta | Seattle, Washington
- Built a gamified "Leagues" feature with Hack and GraphQL that boosted user retention through seasonal engagement.
- Developed ranking and scoring systems that ensured real-time accuracy and cross-system data integrity.
- Optimized league and leaderboard performance, cutting latency by 30% and driving higher user activity.

PROJECTS & RESEARCH

Pipe Census — HBCU Smart Cities Challenge | Rocky Mount, NC February 2025 – April 2025
- Built an AI pipeline with CNN, OCR, and RAG to detect materials and validate addresses for 17K+ water lines.
- Integrated with ArcGIS and 120Water, cutting processing time by 85% and improving compliance reporting.
- Secured first place by delivering a production-ready system that solved a critical municipal infrastructure challenge.

Fraud Detection — FICO Educational Analytics Challenge | Remote January 2025 – April 2025
- Engineered 25+ custom features from a 500K+ dataset to uncover fraud patterns across time, location, and behavior.
- Built and tuned a fraud model optimized for LAUC and AUC, balancing performance with interpretability.
- Earned second place for developing a fraud detection system that balanced innovation, ethical design, and accuracy.

AI in Media Study (Poster Award) — INSPIRE Research Fellow | Huntsville, Alabama January 2025 – April 2025
- Analyzed 3,000+ AI news headlines with VADER and NLP to detect bias patterns in media coverage.
- Found sentiment shifts across outlets and topics, exposing trends in fear-based reporting.
- Won Favorite Poster at AAMU STEM Day 2025 for clear, insightful presentation of media bias research.

Eye-Tracking for Accessible Scrolling — AI4ALL Ignite | Remote September 2024 – March 2025
- Developed a low-cost eye-tracking system to enable hands-free scrolling for users with physical limitations.
- Built a real-time gaze detection pipeline using OpenCV techniques on minimal hardware.
- Integrated PyAutoGUI with multithreading for smooth, calibrated scrolling based on gaze and gesture timing.

LEADERSHIP & ENGAGEMENT

Leadership Roles: Secretary – ACM, Technical Manager – GDSC, Historian – Honors Program
Fellowships & Scholars: Millennium, AI4ALL, Jane Street InFocus, Accenture SLP, Bloomberg Tech Insights, McKinsey League, HBCU 20x20, TMCF, EICOP HBCU in LA (Finalist), Discover ServiceNow
Ambassadorships: Nordstrom, HBCU First
Memberships: IEEE, NSBE, ColorStack, GDSC, Honors Program