Tristan Daniel

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia — Expected May 2026
Master of Science in Computer Science
Specialization in Artificial Intelligence
Studied abroad in Shenzhen, China

Troy University, Troy, Alabama — May 2024
Bachelor of Science in Computer Science

PROGRAMMING SKILLS

Proficient in ***Python, JavaScript, HTML/CSS***; Advanced in ***Java, C++, Typescript***
Framework/platform experience in ***Git, Pytorch, Figma, OpenCV, Android Studio, React.js, React Native, Node.js, Drupal, WordPress, Arduino***

PROGRAMMING PROJECTS

Ewe've Got Nerve: Electronic Headwear System for Sheep Group Behavior Dynamics. — Present

- Animal centered computing project centered on measuring individual sheep temperament by combining Arduino-based (ESP32-based M5StickC PLUS) wearable sensors (Built-in 6-Axis IMU) and computer vision.
- Insights translated and proposed user experience solutions that helps zookeepers monitor sheep behavior and patterns to detect early signs of stress or illness.

practiLang — May 2025

- Chat room web application developed in JavaScript utilizing DeepSeek API for real-time language translation/ practicality suggestions of user input phrases. Web application packaged with Web Sockets, Node.js, and deployed through Render.

Knowledge-Based AI Agent for Solving RPM — Sept 2024

- Developed a knowledge-based AI agent to solve Raven's Progressive Matrices using pattern recognition and logical reasoning, achieving < 70% accuracy in knowledge test performance.
- Designed algorithms utilizing OpenCV for visual and structural analysis of geometric patterns, enhancing the agent's accuracy and decision-making.

Job Searching Mobile Android Application — Sept 2024

- Designed mobile app user interface with Android Studio for development project that allows users to store potential job offers and rank them based on user defined weighted heuristics.
- Multiple SWDL implementations were practiced within an international, cross-functional team to deliver functional applications.

Personal Portfolio Website Project — May 2024

- Designed website for my personal portfolio using HTML to familiarize myself with CSS, HTML, and JavaScript.

CAT Vehicle (Lane Detection) — Aug 2023

- Robust neural network python program that incorporates machine learning algorithms for lane segmentation. Paired with object detection, we provide a more well-rounded description of a driving environment.

EXPERIENCE

Graduate Assistant Web Developer @Georgia Institute of Technology, Atlanta, GA — August 2025 - Present

- Design, develop, and maintain responsive, accessible websites using HTML, CSS, JavaScript, Drupal and WordPress for the Department of Biomedical Engineering.
- Collaborate with the communications team and stakeholders to implement user-centered design solutions.
- Participate in code reviews, testing, and debugging to ensure high-quality deliverables.
- Assist in migrating content and improving site performance and accessibility.
- Contribute to documentation and knowledge sharing within the team.

UX/UI Intern @Qlik, Atlanta, GA — May 2025 – August 2025

- Worked with SaaS program management team to gather and analyze user insights to identify pain points in current self-service user experience.
- Developed user interface for customer support assistant system with React.js and managed backend communication between ADA REST APIs in JavaScript.
- Lead in the development of wireframes, prototypes, and mockups to propose the implementation of an Intelligent Front Door Generative AI assistant. CSAT improved by 4% and customer service contaminant rate 5%.
- Conduct usability testing and iterate designs based on stakeholder feedback and internal deployment.
- Presented findings and design recommendations to stakeholders at the end of the internship.

UX/UI Researcher @Georgia Tech-Shenzhen, Shenzhen, China — Sept 2024 - Present

- Redesigned CAPTCHA system through UX research, addressing violation of Human Computer Interaction (HCI) principles by incorporating cognitive assessments inspired by developmental psychology, specifically those used to gauge cognitive milestones in toddlers.
- Improved user experience by reducing cognitive load while maintaining security (tested against ChatGPT-4o).
- Achieved an average completion time of 13.07 seconds, outperforming the industry average of 13.6 seconds.

Undergraduate Researcher @University of Arizona, Tucson, AZ May 2023 - Aug 2023

- Undergraduate research funded by the National Science Foundation (NSF) on autonomous ground vehicles, controls, communications, vehicular security, machine learning, and algorithms.
- Developed a Deep Learning U-Net neural architecture utilizing Google Colab and Pytorch libraires to produce a state-of-the-art competing lane detection algorithm, improving average F1 (precision and accuracy) metrics by 11%.
- Utilized You Only Look Once (YOLOv8) object detection model for lane classification and analysis, achieving 96.7% testing accuracy.

LEADERSHIP AND COMMUNITY ENGAGEMENT

GT Animal Lab, Georgia Institute of Technology Sept 2025 – Present

- Lab member of Georgia Tech's Animal-Centered Computing Lab. This lab investigates ways that technology can enhance partnerships between humans and animals through wearable systems and environmental devices. We create technologies for animal communication, health monitoring, behavioral quantification, enrichment, and conservation.

STINGERS Lab, Georgia Tech-Shenzhen Aug 2024 – Dec 2024

- Active member of Georgia Tech Shenzhen's collaborative and interactive Makerspace lab equipped with state-of-the-art equipment used for project development centered in robotics, industrial design, software development, and UI research.

LSAMP Scholarship Recipient & Representative, Troy University Aug 2022 – May 2024

- Assist universities and colleges in diversifying the nation's science, technology, engineering and mathematics (STEM) workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in these disciplines. Representative of Troy University's chapter and conference panel guest