

# Tamara-Etaremi (Desirae) Zuokumor

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## EDUCATION

**The University of Alabama, Tuscaloosa, AL**

**Expected Graduation:** Dec 2027

Bachelor of Science in Electrical Engineering, Minor in Computer Science & Math

**Major GPA:** 3.2/4.0

**Honors/Awards:** Honors College, National Recognition Full Tuition Scholarship Recipient

**Relevant Coursework :** Computer Science I (Python), Digital Logic, Electrical Circuits, Calculus I – III, Differential Equations, Linear Algebra, Statistical Data Analysis, Theory of Probability, Physics I – II, Macroeconomics

## RESEARCH

**Undergrad Researcher | Human-Technology Interaction Lab, Dr. Crawford | Tuscaloosa, AL**

**Feb 2025 – Present**

- Engineered facial, sound, and body pose recognition models using Teachable Machine, TensorFlow.js, and ml5.js
- Integrated pre-trained computer vision models on an ESP32 using C++ to enable gesture recognition; connected sensors and actuators to build interactive robotic prototypes that responded dynamically to human gestures and movement
- Presented weekly updates, integrating feedback to refine recognition models and improve AI/ML accuracy by 10–15%.

**Extern | Outamation | Remote**

**Aug 2025 – Present**

- Built AI-powered pipelines to process 200+ page mortgage documents, integrating OCR (Tesseract, PaddleOCR), PDF parsing (PyMuPDF), and Retrieval-Augmented Generation (RAG) for automated data extraction and search capabilities
- Optimized document retrieval system using LlamaIndex and open-source LLMs (Mistral, Phi-2) with chunk tuning and metadata filtering, improving retrieval accuracy by 18%; and built a custom demo UI to showcase performance
- Evaluated OCR, RAG retrieval, and routing performance across pipelines, identifying trade-offs in speed, precision, and scalability; authored a technical report with benchmarking, deployment strategies, and model choice recommendations

## WORK EXPERIENCE

**Electrical Designer Co-op | Jordan & Skala Engineers | Houston, TX**

**Aug – Dec 2024 | May – Aug 2025**

- Constructed and maintained 80+ Excel-based schedules to calculate electrical loads and power distribution for lighting, mechanical, and specialty equipment, while providing scaled disconnects across various commercial projects
- Circuited and mapped electrical devices in Revit and AutoCAD, ensuring compliance with regional codes nationwide
- Performed lighting code compliance checks (ComChecks) and design reviews for 1M+ sq. ft. of commercial projects

**Software Engineering Intern | AdaVerse | Remote**

**Apr – Aug 2025**

- Spearheaded the design of a responsive, mobile-first website for a client using React, TypeScript, and Tailwind CSS, implementing 5+ core pages, 8+ service subpages, lead capture forms, SEO, analytics, and a secure client portal
- Compiled structured AI fashion datasets by analyzing 5+ fashion apps and 30+ style categories; crafted 20+ AI outfit prompts and 10+ social captions to enhance AdoreAI's style recommendation system and streamline content workflows

## PERSONAL PROJECTS

**AI Virtual Painter Computer Vision Project**

**Sep 2025**

Created a Virtual Painter in PyCharm using OpenCV and MediaPipe real-time hand-tracking, allowing users to select up to 7 colors, switch between brush modes, erase, clear the canvas, and save artwork in different styles using intuitive hand gestures

**Cash Compass: Finance Bot (Developed Beyond Hackathon)**

**Aug 2025**

Developed a responsive React app with a chatbot-style interface that explains financial terms, interactive quizzes with progress tracking, and dynamic data visualizations to teach financial literacy and help young adults manage their money

**Personal Portfolio**

**Apr 2025**

Designed a responsive personal portfolio website using HTML, CSS, and JavaScript, featuring structured layouts, light/dark mode, a Google Sheets-integrated contact form, and showcased technical and creative projects including video editing

## SKILLS

- Technical :** Python, Java, C++, C#, React, TypeScript, JavaScript, HTML/CSS, Tailwind CSS, TensorFlow.js, OpenCV, ml5.js, p5.js, SQL, RAG, OCR, JSON, Quartus Prime, OrCAD, AutoCAD, Revit, Excel, Figma, Adobe Premiere Pro
- Soft :** Adaptability, Detailed, Optimization & Benchmarking, Problem Solving, Time Management, Team Collaboration

## EXTRACURRICULARS

**Active Member :** ColorStack | Tikkun Olam Makers (RISE Project) | National Society of Black Engineers (Peer Mentor) | Girls Who Code (Youth Mentoring) | Association of Computing Machinery/Women | AI Club | Crimson Trade Group