Christopher Yarbro

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EDUCATION

TULANE UNIVERSITY | Newcomb-Tulane School of Liberal Arts | School of Science and Engineering New Orleans, LA
Dual Degree: B.A. in Political Economy and B.S. in Computer Science May 2026
Overall GPA: 3.97/4.0 Computer Science GPA: 4.0/4.0 Political Economy GPA: 4.0/4.0

- **Relevant Coursework:** Operating Systems, Computer Systems & Networking, Algorithms, Discrete Math, Functional Programming, Language-Based Security, Artificial Intelligence, Machine Learning, Data Science
- **Research:** Healthcare Outcomes in Geographically Similar Regions with Different Medicaid Expansion Statuses; Banking Crises in Latin America: Causes and Effects; LLM Summarization Evaluation Metrics in the Legal Realm
- **Honors**: Magna Cum Laude, Tulane URAF Grant Recipient, Academic Recognition Award, Dean's List (7/7 semesters)

EXPERIENCE

Turner Construction New York, NY
Data Engineer October 2026 – Present

- Built a reusable data quality framework that validates data across teams and schemas in Turner's enterprise data lake
- Built an internal app for Power BI data access requests, cutting unneeded license spend and access delays
- Migrating a legacy pipeline from a third-party data source to Turner's production data source

Data Engineering Intern June 2026 – September 2026

- Designed a data quality layer in the enterprise data lake, reducing pipeline failures behind enterprise dashboards
- Built production data pipelines that feed enterprise dashboards and machine learning models

Tulane School of Science and Engineering / Center for Community Engaged Artificial Intelligence New Orleans, LA
Teaching Assistant to Dr. Zhengming Ding – Intro to Artificial Intelligence December 2025 – May 2026

- Designed lesson plans, the course schedule, and hands-on class projects for Tulane's Intro to Artificial Intelligence course
- Held regular office hours and assisted with grading

Research Assistant to Dr. Aron Culotta April 2025 – September 2025

- Built an LLM summarization pipeline for Court Watch NOLA (DSPy, Ollama, Pandas) generating structured case summaries for volunteers who get ~15 minutes' notice before hearings

PROJECTS

Moire – Senior Capstone Project – 2026 Tulane SSE Engineering Expo "Best Project" Winner

- Received a $3,000 Tulane URAF grant to build low-cost soil-moisture sensors for reforestation at FCAT in Ecuador
- Designed sensor-node PCBs with soil-moisture, temperature, humidity, and light sensors
- Wrote C/C++ LoRa mesh firmware (Meshtastic): sleep scheduling sent over the mesh, transmit jitter, range tuning
- Built a zero-CPU pulse counter for the moisture probe from nRF52 PPI and timers, open-sourced as nrf_pcnt
- Built a monitoring platform (TypeScript/React, Express.js, MySQL) for researchers to configure nodes and visualize data
- Deployed 15 nodes at FCAT; the longest-running ran 6 months unattended. Now advising the 2026–27 team

Weenix – UNIX-like OS kernel in C: processes, threads, device drivers, VFS, System 5 filesystem, virtual memory
Traintime – Rust service turning GTFS-Realtime transit feeds into arrival packets for a hardware display; tested, CI, panic-free
Uthreads – a user-level multithreading library that provides a user-friendly API for thread creation, synchronization, and destruction
Funclang – Interpreter in Rust for a small OCaml-like functional language with recursion, lexical scoping, lists, and pattern matching

LEADERSHIP

Tulane Inter-fraternity Council Executive Board New Orleans, LA
Director of Health Initiatives January 2024 – May 2024

- Introduced Tulane IFC's first NARCAN and test strip distribution program and worked with Campus Health to update chapter health and safety modules

SKILLS / OTHER INFO

LANGUAGES: C, C++, Rust, Python, TypeScript/JavaScript, OCaml, SQL
EMBEDDED & SYSTEMS: nRF52 (nrfx), Zephyr, PlatformIO, LoRa/Meshtastic, Linux, Git, Docker
DATA & WEB: Databricks, Spark, Pandas, scikit-learn, TensorFlow, Ollama, MySQL, React, Express.js, STATA