

CHARLES HARRISON BRAMMELL III

5918 Laurel Street, New Orleans, LA 70115

📞 504-812-3125 ✉️ chb0055@auburn.edu  [linkedin.com/in/charles-brammell](https://www.linkedin.com/in/charles-brammell)

Education

Auburn University

Expected August 2026

Bachelors of Science in Computer Engineering - GPA: 3.7

- Minor in Finance

Skills

Technical Skills: Signal Processing, Digital Hardware Design, Embedded Systems, Experiment Design, Mathematics, System Integration

Interpersonal Skills: Leadership, Technical Communication, Creativity, Collaboration, Teamwork, Flexibility

Tool Skills: C/C++, System Verilog, Matlab, Python, Electrical Test Equipment, Java, SPICE, L^AT_EX

Work Experience

Auburn Neuroimaging Research Center

Summer 2025 – Present

Summer Undergraduate Research Fellow/Research Assistant

Auburn, Alabama

- Modified and optimized existing MRI reconstruction algorithms to accommodate muscle tissue, demonstrating the ability to adapt complex theoretical frameworks to novel research needs
- Analyzed complex imaging concepts, including Diffusion Tensor Imaging and Extended Phase Graph modeling, to inform the strategic adaptation of post-processing implementations for muscle tissue
- Systematically compared the performance of diverse image correction methods and synthesized findings into a formal technical presentation for a professional research audience

See No Fees Financial

Summer 2023

Software Intern

New Orleans, Louisiana

- Developed custom tooling for data analytics both internally and for clients
- Implemented data collection across companies internet presence for lead generation
- Prepared instructional material and trained sales staff on effectively interpreting data
- Researched and proposed custom card processing solutions for clients with unique and novel needs

D'Livery NOLA

Spring 2020 – Summer 2024

Senior Delivery Agent

New Orleans, Louisiana

- Ensured the timely delivery of goods with special handling requirements such as temperature controlled medications
- Completed emergency routes outside of scheduled hours with minimal notice

Involvement

IEEE Eta Kappa Nu Honor Society – Xi Chapter

August 2025 – Present

Vice President

Auburn, Alabama

- Oversaw joint events with other student organizations such as K-12 engineering outreach and professional development seminars
- Represented chapter to nationals, securing award based funding and ensuring good standing
- Recruited and guided new members as they strive to achieve the societies standards
- Organized service opportunities to ensure members meet individual volunteer requirements
- Coordinated faculty participation in the largest public resource bank on campus

Sigma Nu – Beta Theta

Fall 2023 – Present

Scholarship Committee Engineering Representative

Auburn, Alabama

- Organized and led group review sessions for underclassmen in engineering
- Managed engineering section of resource bank comprised of notes, tests, lectures and study guides

Projects

Interactive LLM Tokenizer Analysis Framework | *Hugging Face, Tokenizer Architecture,*

Spring 2026

- Designed a modular evaluation framework utilizing custom drivers to wrap tokenizers, enabling scalable benchmarking of BPE, WordPiece, and SentencePiece algorithms.
- Developed an extensible toolbox enabling simple implementation of novel datasets, models, and evaluation metrics.
- Identified meaningful performance metrics and conveyed test results via graphs and other data visualization tools.
- Facilitated data-driven LLM deployment decisions by evaluating the impact of tokenizer bias on processing speed, memory consumption, and compute costs.

FPGA AES Encryption Accelerator | *System Verilog, Digital Design, SPI, Vivado*

Fall 2025

- Engineered a custom hardware-accelerated AES encryption module using Verilog and Digital Design principles, specifically optimized for deployment on a Nexys A7 FPGA.
- Designed the system architecture in Vivado and implemented robust serial communication interfaces, successfully bridging the FPGA with external data sources via UART and SPI protocols.