

BRIANNA DICKSON

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EDUCATION

The University of Texas at Austin

Aug 2023-May 2027

- **Bachelor & Master of Science in Electrical and Computer Engineering, Minor in Robotics** GPA: 3.91
- **Technical Skills:** Python, C, C++, Java, MATLAB, SQL, JavaScript, Node.js, Git, Object-Oriented programming, Verilog
- **Relevant Courses:** Computer Architecture, Software Engineering & Design, Algorithms, Embedded Systems Design Lab

EXPERIENCE

Dell Technologies - *Hardware Intern* – Austin, TX

May 2026-Aug 2026

- Developed an internal AI-powered PCB analysis tool integrating OCR, SAM, and GPT-based models to automatically identify and catalog IC components from board scans, improving hardware diagnostics and design workflows
- Conducted a full ambient-temperature measurement study—including experimental design, data collection, and thermal modeling—to produce insights that informed system-level thermal behavior and future design decisions
- Contributed to early-stage hardware design by creating schematics for a next-generation system, collaborating with senior engineers to ensure component accuracy and architectural alignment

ExxonMobil - *Instrumentation Engineering Intern* – Baytown, TX

May 2025-Aug 2025

- Spearheaded a brittle fracture mitigation project by designing a new alarm system, routing safety instrumentation, programming digital logic, and developing visual alerts for operators to enhance plant protection
- Supported a global PLC obsolescence initiative by auditing all spare PLC cards across the Baytown site, enabling a company-wide exchange network and mitigating financial risks of up to \$350 million
- Acted as the instrumentation point-of-contact for the process team, recalculating and re-ranging sensor and valve parameters to ensure compliance with safety standards and improve operational reliability

Birch Hill LLC - *Computer Engineering Intern* – The Woodlands, TX

Dec 2023-Aug 2024

- Automated structural engineering calculations by developing a custom application, reducing job turnaround time by 50%
- Migrated company software to a web-based platform, enabling hundreds of customers to access databases and applications more securely and conveniently, while simplifying backend updates
- Designed and implemented physical testing systems for construction loads using various measurement tools and software

PROJECTS

Instruction & Cycle Level Computer Simulator - C, WSL

- Built a simulator that parses assembly, translates to machine code, and executes on a custom control store/datapath

Autonomous Basketball Robot - Python, Onshape

- Engineered a fully autonomous robot with TOF/IR sensing for navigation, able to aim a shooting mechanism to score

Minecraft-Inspired Jukebox - C, KiCad

- Designed and implemented an RFID-triggered jukebox that reads NFC tags to stream stereo WAV audio from an SD card through dual DACs, coordinating three concurrent SPI buses for audio playback.

Pupper Leg - Python, Fusion360

- Created a robotic leg controlled via AprilTag vision tracking for precise motion

LEADERSHIP ACTIVITIES

Institute of Electrical and Electronics Engineers (IEEE)

Aug 2023-May 2026

- Led electrical development within IEEE RAS's Stampede robotics team, designing the "Chassis" PCB in KiCad and coordinating integration across multiple custom boards to ensure reliable power distribution and system cohesion
- Directed large-scale engineering outreach as Corporate Director & Activities Officer, planning 40+ events with 30+ campus organizations and engaging up to 150 students to strengthen collaboration and community
- Represented IEEE on the Student Engineering Council, contributing to strategic planning and cross-program initiatives impacting more than 1,000 engineering students.

ADDITIONAL

- **Honors:** Cockrell College Scholar (2025,2026), AP Scholar with Distinction (2023), National Merit Commended Scholar (2023)
- **Work Eligibility:** Eligible to work in the U.S. with no restrictions