Seth McDaniel

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EDUCATION

Texas Tech University, Lubbock, Texas   Graduation May 2027
Junior Bachelor of Science in Computer Engineering   **GPA: 4.0**
Junior Bachelor of Science in Mechanical Engineering   **GPA: 4.0**

EXPERIENCE

Tyler Technologies, Lubbock, Texas
Software Engineering Intern   May 2025 - August 2025
- Increased team efficiency by implementing an automated issue detection dashboard, improving deployment time by 40% for my 20+ team members bi-weekly meeting.
- Implemented real time database checks through AWS lambda functions, providing cost effective codebase health checks
- Effectively coordinated and efficiently communicated with product team to create specifications and plan our project

NOTABLE PROJECTS

Warehouse Rover
- Implemented the Top-Level Controller along with all associated Verilog for a warehouse rover on an FPGA Basys3 board
- Utilized GPIO pins to receive inputs from things such as IPS, IR, and proximity sensors to process and dictate behavior of robot
- Designed and implemented an 85-state state machine to keep our robot on track and complete the objective

4-bit CPU on Breadboard
- Designed and wired a fully functional 4-bit CPU on a breadboard using only basic logic gates and one PLD
- Constructed a basic ALU capable of performing addition, subtraction, XOR, and other bitwise operators
- Implemented a hardwired instruction set with basic arithmetic and logical operations using Multimeters for debugging

Maze Solving Robot
- Developed an MSP430-based robot that utilized simple rule-based strategies to solve the maze in different ways
- Used sensor feedback to optimally follow maze route, timing each run and selecting the fastest based on real-world performance testing
- Programmed entirely in assembly on a small microcontroller, requiring efficient use of memory

INVOLVEMENT

Eta Kappa Nu, Computer Engineering Honors Society
Officer   November 2024 - Present

- Maintained detailed and organized meeting minutes, ensuring accurate records of discussions, and decisions for the chapter
- Supported event planning for the organization, contributing to professional development and academic support for members
- Promoted academic excellence and collaboration among members, enhancing technical skills of members

Red Raider Racing
Member   August 2022 - July 2023

- Gained hands on experience in TTU's machine shop, utilizing advanced tools and machinery to support vehicle construction
- Collaborated with a multidisciplinary team to design and build a high-performance SAE vehicle
- Remodeled the vehicles suspension system using professional CAD software, optimizing design for performance

SKILLS

Technical Skills
        Verilog, C, C#, C++, Python, Assembly, Autodesk Inventor 2024, Revit 2022, Fusion 360, KiCad, AWS lambda
Professional Skills
        Communication, Teamwork, Problem-Solving, Time Management, Adaptability, Organization
AWARDS - Six-time recipient of TTU Presidents Honor List Certificate