Marzuq Mazid

Austin, TX
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Education

University of Texas at Austin **August 2023 – Present**
Bachelor of Science in Electrical and Computer Engineering *Austin, TX*

Relevant Coursework

- Electrical Engineering
- Computing
- Embedded Systems
- Linear Systems & Signals
- Software Implementation
- Digital Logic Design
- DiffEq with Lin Alg
- Matrix Calculations

Experience

Feeling Blessed **July 2024 – Present**
Software Engineer Intern *Remote*

- Collaborated with a team of interns to integrate alternative payment methods (e.g., PayPal, Google Pay) into the organization's website and mobile app, enhancing user convenience and payment flexibility.
- Led the design and research for a stock donation feature, conducting comprehensive evaluations of UI/UX requirements, API capabilities, platform compatibility, and technical feasibility to identify the best implementation approach.
- Evaluated and recommended best practices for implementing donation functionalities, focusing on streamlining user interactions, enhancing platform integration, and ensuring a seamless user experience.

Texas MSA **December 2024 – Present**
Lead Full Stack Web Developer *Austin, TX*

- Developed the Texas MSA official website using HTML, CSS, and JavaScript using Visual Studio Code, ensuring cross-browser compatibility and responsive design while supporting seamless updates.
- Led a team of developers in designing and building a web application, overseeing project excecution and deployment.
- Designed a modular and scalable architecture, integrating dynamic content sections and optimizing user interaction.
- Utilized Netlify for deployment and hosting, streamlining CI/CD workflows and updates with minimal downtime.

Elyceum **June 2021 – August 2021**
Front-End Developer Intern *Remote*

- Collaborated with a cross-functional team to design and develop a dynamic organization website, incorporating feedback from web development interns and other departments to meet project goals.
- Developed and maintained web pages using HTML/CSS, ensuring responsive design and optimal user experience.
- Utilized WordPress to manage content and enhance website functionality, implementing plug-ins and custom themes.

Projects

Embedded System Video Game | *C*, ARM Assembly **December 2024**

- Developed handheld video game using the MSPM0G3507 LaunchPad microcontroller, integrating hardware components including an LCD display, slide potentiometer, and buttons for user interaction.
- Utilized interrupt-driven software architecture, including ADC for real-time potentiometer input processing and DAC for sound generation, ensuring smooth and responsive system performance.
- Created a modular codebase for custom sprite rendering and multilingual support, emphasizing scalability and adaptability to project requirements.

Hotel Room Reservation System | *LC-3 Assembly Architecture* **April 2024**

- Developed a hotel room availability checking program using Little-Computer 3 (LC-3) assembly language.
- Implemented an algorithm to traverse a linked list data structure using 16-bit architecture to identify available rooms while optimizing memory usage and processing efficiency.
- Designed user input/output functionality, allowing users to select desired rooms interactively.

Buck Converter | *Circuit Design, PCB Design, KiCAD, LTSpice* **November 2023**

- Designed and built a modular buck converter achieving over 90% efficiency to step down voltage levels.
- Tested and validated gate drivers, MOSFETs, and other components using signal generators and oscilloscopes.
- Validated performance under varying loads, measuring key parameters including output voltage and inductor current.
- Troubleshot and optimized circuit performance, achieving consistent functionality in line with design specifications.

Technical Skills

Languages: Python, Java, JavaScript, C, C++, Verilog, HTML/CSS, Assembly(ARM and LC-3)
Tools: VS Code, Xilinx Vivado, MATLAB, Code Composer Studio, KiCAD, LTSpice, TI MCU, FPGA, WordPress
Programs: Microsoft Office Applications, Google Workspace, Github