Shelton Foust

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Education

Texas Tech University, *Lubbock, TX* **Actual Graduation: December 2024**
Bachelor of Science in Computer Engineering, Magna Cum Laude **GPA: 3.747**
Minor in Computer Science

Experience

Sandia National Labs, *Albuquerque, NM*
Software Engineering Intern Year-Round June 2023 – Present

- Native Windows Desktop App Development
  - Developed in WPF using C#/.NET and XAML.
  - Created models and views to expand support for new external devices using the MVVM pattern.
  - Cleaned code base by creating and refactoring view models using SOLID principles and design patterns.
  - Wrote code that is being used in a production environment.
- Full-Stack Web Development in JavaScript/React
  - Developed using JavaScript, TypeScript, Node, React, CSS/HTML, Docker, Prisma, Vite and Bootstrap.
  - Designed database tables and web pages to create a notifications system.
- Acquired a Top Secret Clearance with the DOE (US Department of Energy).

Projects

Web Development in ASP.NET using C# – Capstone Project Lab Fall 2024

- Individually created a web application for a behavioral health agency to keep track of due dates for reports and manage subcontractors.
- Used ASP.NET Core MVC, Entity Framework Core (EF Core), and Azure App Service.

API Design in Java Spring Boot – Advanced Database Management Systems Fall 2024

- Designed an API working as a back-end developer in a team of four to create a web application using Java Spring Boot and Angular.

Web Development in ASP.NET using C# – Software Development Project Lab Spring 2024

- Lead a team of three to create a real-time multi-page web app for the department advisor to manage the line for his office hours.
- Developed in ASP.NET Core Blazor Server using C#/.NET and Razor (CSS/HTML) with database managed using EF Core and Microsoft SQL Server.
- Implemented authentication with automated email confirmation and authorization with separate student and faculty roles.
- Supported real-time updates on the front end using RPC (SignalR).

Intelligent Systems (Intro to AI) (Graduate Level) Spring 2024

- Trained a generative model to generate MIDI files to play music using Python and PyTorch.

Microcontroller Project Lab Fall 2023

- Worked in a team of four to program a TI MSP430 microcontroller in C to play various Christmas songs by ringing multiple bells.

Embedded Systems Fall 2023

- Worked individually to program a TI MSP432 microcontroller in C to parse messages through a command prompt, build programs with timer interrupts, send messages to other embedded devices, and play a sound based on its frequency. Programmed using a real-time operating system (TI RTOS).

Robotics Project Lab Spring 2023

- Worked in a team of three to program a Basys3 board in Verilog to control a rover that traversed a track and responded to its environment.

Other Relevant Coursework

- Advanced Operating Systems Design, Advanced Database Management Systems, Microprocessor Architecture, Computer Networks, Algorithms, Software Engineering, Object-Oriented Programming, Data Structures, Intro to Assembly, Digital Systems, Intro to C, and Intro to Python and Data Science.

Technical Skills

Programming Languages

Advanced: C#, XAML
Intermediate: Java, C, C++, TypeScript, JavaScript, Python, HTML, CSS, SQL
Novice: Verilog, Assembly Language

Frameworks and Tools

Advanced: ASP.NET Core, Entity Framework Core (EF Core), ASP.NET Core MVC, ASP.NET Core Blazor, WPF, MVVM, LINQ, Visual Studio, Git, GitHub, GitLab
Intermediate: React, Bootstrap, Prisma, Zod, Vite, Yarn, Docker, Node.js, VS Code, Jira, Confluence, Bash, Command Prompt, PowerShell, Jupyter Notebook, PG Admin 4
Novice: Eclipse, IntelliJ, Xilinx ISE, Vivado, SQL Server Management Studio, Linux, VMware, Azure

Awards

American Vacuum Society Scholarship	2021
President's Honor List	Fall 2021 and Spring 2023
Dean's List	Spring and Fall 2022
Full Presidential Merit Scholarship	Fall 2021 – Fall 2024
William A. Brookshire Foundation Scholarship	Fall 2024
Magna Cum Laude	December 2024