Miller Boyd

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Proficient Languages and Tools

Java, C++, C, C#, Python, JavaScript ES6+, HTML5, React, NodeJS, SQL, NoSQL, MongoDB, MATLAB, Swift, AWS, Jira

Education

- **Southern Methodist University** — Jan 2022 – Current
  B.S. Computer Science – 3.3 GPA — *Graduation: August 2024*
- **Certificate, UCF Full Stack Web Development Program** — Jun 2021 – Sep 2021
- **Blinn College** — Jan 2020 – Dec 2021
  B.S. Computer Science – 3.64 GPA
- **University of Texas at Arlington** - *Honors College* — Aug 2018 – Dec 2020
  B.S. Computer Science – 3.24 GPA

Experience

Lockheed Martin ML App – X-RAY Weld Flaw Detection App — Jan 2024 – May 2024
- Dev Stack: Keras, Python, Flask, Pyinstaller, React, Electron, Material UI
- Full-stack application for Lockheed Martin to detect microscopic weld flaws in X-ray images. Utilized a Convolutional Neural Network (CNN) built with Keras to analyze segmented X-ray images, improving detection accuracy and recall. The app features a responsive UI built with React and a deployable desktop application using Electron, ensuring ease of use and compatibility. Managed the project using Agile methodologies and tracked progress with Jira.

Connect 4 AI — Apr 2024
- Dev Stack: Python, NumPy
- AI agent for playing Connect 4 using bitwise operations for efficiency. Implemented various agents, including a minimax-based agent with alpha-beta pruning and a heuristic evaluation function. The project involved defining the game state, possible actions, and the transition model.

IOS Machine Learning App – Dallas Zoo Animal Identifier — Aug 2023 – Dec 2023
- Dev Stack: Objective-C, Swift, Python, Tornado, PyTorch
- Proof-of-concept iOS app for the Dallas Zoo that captures audio and identifies the animal producing the sound. Utilized Objective-C and Swift for the frontend, and Python with Tornado and PyTorch for the backend to process audio data and perform real-time animal recognition.

3DVR UI Research Project – Hand Gesture UI Interaction — Mar 2023 – May 2023
- Dev Stack: Unity, C#
- Developed a 3D UI package for VR exploring glassmorphism and intuitive gestural inputs to enhance user experience.

CS 3330 Full Stack Semester Project – Farm Hand — Jan 2022 – May 2022
- Dev Stack: MySQL, Express, NodeJS, JavaScript, React, Material UI
- Built an app for managing and trading livestock with a chat feature. Utilized MySQL for database management and Express for API endpoints. Managed the project using Agile methodologies and tracked progress with Jira.

Relevant Courses

Machine Learning, Artificial Intelligence, Digital Computer Design, Software & Project Management, Cloud Computing, Mobile Apps & Sensing, Software Engineering, Operating Systems, Database Concepts, Virtual and Augmented Reality, Fundamentals of Algorithms, Digital Logic Design, Differential Equations, Computer Networks and Systems

Organizations

SMU Esports Club - Member	Aug 2022 – Present
SMU Computer Science Club - Member	Jan 2022 – Present
SMU Cybersecurity Club - Member	Jan 2022 – Present