Eric Tabuchi

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Education

Pepperdine University **Malibu, CA**
B.S. Computer Science and Mathematics 3.915 GPA *August 2018 - May 2021*
- **Selected Coursework:** Computer Systems, Data Structures, Programming Paradigms, Computer Networks

Washington University in St. Louis **St. Louis, MO**
B.S. Computer Engineering 3.96 GPA *August 2021 - May 2023*
M.S. Computer Engineering 4.00 GPA *August 2023 - May 2024*
- **Selected Coursework:** Computer Architecture, Digital Integrated Circuit Design and Architecture, Computer Systems Design, Object-Oriented Software Development, Video Game Programming, Mobile Application Development

Technical Skills

Programming Languages: C#, VHDL, React, React Native, Swift, Python
Developer Tools: Git, Prisma, Firebase, AWS, Vivado, Cadence Virtuoso, Unity, Slack
Portfolio: eric-tabuchi.com

Experiences

Portal - Revolutionzing Career Discovery | React, React Native, Node.js, Prisma, PostgreSQL **May 2024**
Full-Stack Software Engineer Intern
- Led development for short-form video content iOS app, improving upon initial frontend designs and functionality.
- Enhanced backend server architecture to support additional database and search capabilities for video and user content
- Developed a landing page site to advertise the application, collect user data, and send emails to interested users

Asia in St. Louis | C#, Unity, MapBox, Firebase **Nov 2023**
Software Engineer
- Developed an Android application where users explore Asian American history through location-based services
- Integrated Google Firebase and MapBox APIs to visualize geographical data and store historical site information

Projects

Ocsilloscope Simulation | VHDL, ExpressPCB, Python, Tkinter **Jan - May 2023**
- Created a 32-bit microcontroller using a programmed FPGA and custom PCB that outputs continuous two-channel data
- Implemented a Python Tkinter GUI to serially connect with the microcontroller and graph oncoming data in real-time

8-Bit Encryption CMOS Chip | Cadence Virtuoso, Python **Jan - May 2024**
- Designed schematic and layout of CMOS Chip able to encrypt 8-bit data using the Simplified DES algorithm
- Tested and verified design through Cadence simulations and Python version of algorithm.

ARCraft - Play in Real Life | Swift, Firebase **Jan - May 2022**
- Lead tester and frontend developer for an AR Video Recording iOS application.
- Integrated and managed Firebase to support user authentication and database video uploading

Project Grinch | C#, Unity **Aug - Dec 2022**
Endless Runner Video Game
- Lead animation and UI programmer, developing and managing all game animations and UI functionality
- Implemented an infinitely repeating level track and gameplay logic
- Held playtesting and weekly team meetings to gain user feedback and gauge development based on group progress.

Defusing the Situation | C#, Unity **Jan - May 2023**
First-person Shooter Video Game
- Lead level and object designer, implementing gameplay logic for player progression and non-playable entities
- Visual effects and audio programmer, working with the Unity particle and audio system to generate vibrant and appropriate effects based on player action.

Stumpy | C# **Jan 2023**
STL Game Jam 2023 Entry
- Main gameplay programmer for a three-person development team working on a game prototype within 3 days
- Utilized a custom C# game engine to code all gameplay logic and deliver within the short time frame