LIAM HORCH

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EDUCATION

George Mason University   *August 2024 - Present*
Master of Science in Computer Science

University of Maryland, College Park   *May 2022*
Bachelor of Science in Computer Science
Minor in Mathematics

WORK EXPERIENCE

Alarm.com Mobile Engineer   *March 2022 - Present*

· Collaborating on a cross-functional, agile full stack team to develop user-focused security features and UI improvements, impacting millions of users weekly.

· Designing a real-time HTML to SwiftUI trans-compiler that supports advanced UI elements, outperforming Apple's NSAttributedString by 50% in rendering speed.

· Delivering the new AI chatbot feature from the ground up, leveraging an LLM to handle user inquiries, hosted on one of the company's first micro APIs.

· Skills employed: Swift, SwiftUI, Combine, Obj-c, C#, MYSQL, JIRA, BitBucket

Focused Support LLC Software Engineer Intern   *May - August 2021*

· Integrated a large collection of positional data from a government provided server, which updated regularly through the use of java multithreading, in order to visually populate a map for a classified program.

· Mimicked the dead reckoning algorithm to predict the path of aircraft and decrease run time by 60%.

· Skills employed: Java, Big data, React, Multithreading, REST APIs, git, AWS

PROJECTS

Objective-C Subset Interpreter   *August 2024 - Present*

· Engineered an interpreter in Swift that processes a subset of Objective-C, supporting features such as closures, classes, functions, arrays, I/O, and more.

· Developed a command-line chess game using Objective-C, which was fully executed by the interpreter, demonstrating its capability to handle complex logic, data structures, and control flow within the supported subset of Objective-C features.

· Skills employed: Swift, Objective-C, Interpreter design, Memory management, AST, Lexical analysis

Mini Social Media (Beta)   *March - December 2023*

· Created a stripped down de-cluttered iOS social media app where users can only post 42 character blurbs.

· Hosted the backend on AWS Amplify for image storage and managed user data and posts using Google Cloud MySQL.

· Designed a robust backend using JavaScript, Node.js, and Express.js, enabling seamless mobile app connectivity to the hosted MySQL server.

· Skills employed: SwiftUI, AWS Amplify, MYSQL, Relational databases, Networking, JavaScript

Wordeely   *October 2022 - February 2023*

· Developed an app encapsulating an addictively simple word game, perfected through the feedback from a curated group of testers

· Deployed an automated back-end using Node.js and Express to deliver a daily wordeely for infinite replays.

· Successfully launched the app on the Apple App Store.

· Skills employed: Swift, SwiftUI, App development, UI/ UX, Google Cloud, Node.js, Express, MongoDB