Liam Rosenfeld

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SKILLS

Languages	Swift, Rust, Objective-C, C++, C, Python, ARM, X86, & AVR Assembly, Typescript, SQL, VHDL
Frameworks	SwiftUI, AppKit, UIKit, Accelerate, Axum, Vue, Svelte
Tools	macOS, Linux, Git, Xcode Instruments, Web Assembly, Docker, MongoDB, LaTeX

EDUCATION

BS in Computer Engineering, University of Florida   Class of 2025
GPA: 3.98, Minor in Mathematics, Honors Program, University Scholars Program

WORK HISTORY

Software Engineering Intern   Summer 2024
Apple
- On the Productivity Apps team responsible for canvas, editing, and core infrastructure
- Designed and implemented a feature to address a highly requested use case
- Developed and verified a collection of geometric algorithms

Software Engineering Intern   Summer 2023
Apple
- On the Productivity Apps team responsible for canvas, editing, and core infrastructure
- Built a highly requested feature for Keynote, Pages, and Numbers on macOS, iOS, and Web
- Wrote a specification to define the behavior of the feature and its implementation
- Debugged a complex UI framework

Backend Software Engineer   Summer 2022
Parametic Capital
- Built a server to collect, aggregate, and serve time series metrics to a visualization frontend using Rust

RESEARCH

Lilypad 2021-Present   Paper, Writeup
- Building a text-based visual code editor to improve programming education
- First author for showpiece paper in the 2023 IEEE Symposium on Visual Languages and Human-Centric Computing
- Building using Rust to run native and in Web Assembly

SELECT PROJECTS

NaviGator Released 2023   Writeup
- Third party mobile app for the Gainesville bus system with over five thousand daily active users
- Built in a team of two, my responsibility is the live map (built with MapKit) and data fetching

UF Cat Tracker Built 2022   Writeup
- Website so students can crowdsouce the location of friendly campus cats to pet
- Built in a team of four using Rust, React, and PostgreSQL for ease of development and stability

Iconology Released 2020   Writeup
- macOS app to streamline the process of icon generation with 6.5k downloads
- Built using AppKit, CoreGraphics, and SwiftUI

Raspberry Pi OS Built 2022   Writeup
- A kernel and basic operating system for a Raspberry Pi built in Rust
- Implemented booting, GPIO, UART, chainloading, allocation, and a Fat32 filesystem

WWDC Accepted Scholarship Playgrounds 2019, 2020   2019 Writeup, 2020 Writeup
- Visualized the Fourier transform as applied to both art (in 2019) and sound (in 2020)
- I had an opportunity to discuss my projects with Tim Cook

Image To ASCII Art Released 2017   Writeup
- iOS and macOS app on the App Store with seventeen thousand downloads
- Interface built using SwiftUI, UIKit, & AppKit and generation uses Accelerate vImage

TEACHING

Advanced Programming Fundamentals (COP 3504C) TA   Fall 2022