Josef Bertolini

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EDUCATION

University of California, Irvine
B.S. in Computer Science & B.S. in Computer Game Science   GPA: 3.74, *Cum Laude*
Relevant Coursework: Advanced C++, Systems Design, Compilers, Operating Systems, Video Game Development/Design

PROFESSIONAL EXPERIENCE

Microsoft, Cloud Security   May 2022 - Present
Software Development Engineer   C++, PowerShell
- Maintained a critical security Azure VM Extension, running on **over 2 million machines**
- **Lead development** to add support for two new types of resources and more configuration options
- Crushed bugs and **implemented new features** to simplify onboarding, improve reliability, and ease troubleshooting
- **Created the testing infrastructure** for the extension, including monitors, alerts, and dashboards
- Refactored and modernized legacy spaghetti code to make development **less error-prone**
- Worked closely with customers to **triage issues, find bugs/logic errors**, and provide quick mitigations

Ezoic, Inc.   June 2021 - April 2022
Software Engineer   Go, JavaScript
- Single-handedly **maintained core repositories and databases** for *LEAP Technologies* weeks after starting
- **Improved performance and reliability** of its crons, APIs, tools, and customer-facing web apps by up to 5x
- **Worked with other teams** to integrate the APIs into other products and wrote documentation for future usage
- Took feedback from coworkers and customers, implementing new features and improvements for **better usability**

University of California, Irvine   March 2021 - June 2021
Undergraduate Reader   C, Python
- Designed assignments covering **C and topics from Systems Programming** (shells, memory allocators, etc.)
- Authored the Networking Project as a paralleled auctioning server with a **custom networking protocol**
- Assisted students in **debugging code** and responded to student questions on the class forum

RELEVANT PROJECTS

Manga Packager - Go, JavaScript   Summer 2023
- Simple server that scrapes websites and packages manga pages into a format readable on an iPhone or iPad
- Created a **mobile-friendly web-page** to proxy searching for manga titles and directly download to the device
- Designed the server to use **RAM-only procedures** to avoid issues with storing copyrighted material to disc

Raging Rocks - Unity, C#   February 2021
- Senior Capstone Project, an Angry Birds Clone playable in a web browser
- Served as **the Primary Gameplay and UI programmer**, implementing most gameplay mechanics and menus
- Blueprinted and mplemented the power up system, making prototyping and tweaking a frictionless process

Chatroom Server - C   December 2020
- Developed the server-side of a direct messaging and chatroom application similar to IRC
- Used **POSIX** threads to make a safe, performant server that supports an arbitrary number of concurrent users
- Implemented **thread-safe generic HashMap, HashSet, and Vector** data structures from scratch

Crux Compiler - Java   April - June 2020
- Wrote a compiler for a simple programming language, Crux, in Java with **LLVM**
- Developed a **full stack compiler** from grammar structure to x86_64 code generation using ANTLR4
- Implemented functions, recursion, **short-circuiting control flow**, strong typing, static scoping, and shadowing

SKILLS

Programming Languages and Tools
- Proficient: C++, C, Golang
- Familiar: PowerShell, JavaScript, Java, Python
- Have Used: C#, Rust, Vue.js
- Platforms: SQL Databases, Azure Cloud, Git
- Environments: Windows/Mac/Linux, Command Line

Interpersonal Skills
- Sociable, Adaptable to New Environments, Desire to Learn
- Quick Learner, Clear Communicator, Passionate