

Josef Bertolini

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EDUCATION

University of California, Irvine June 2021
B.S. in Computer Science, B.S. in Computer Game Science GPA: 3.74
Coursework: Advanced C++, Systems Design, Compilers, Operating Systems, Videogame Development, Full Stack WebDev

PROFESSIONAL EXPERIENCE

Major League Hacking, US DoD joint October 2020 - Present
MLH Fellow (Software Engineering Intern) JavaScript, Java

- Created a web app for automating, streamlining, and securing the processing of DD2875 System Authorization Forms
- Built the **RESTful API** with **Node.js**, **Express**, and **PostgreSQL**; also composed the schema for the Database
- Incorporated app security by using **SSL Authentication** with https and the **Helmet.js** library
- Wrote and Connected a **Java app** to read data from DoD CACs to verify users in lieu of a login page

KPX Engineering June 2019 - September 2019
Assistant Data Analyst Python

- Contracted to complete a project pertaining to staffing and speed of service for Taco Bell Corp.'s International branch
- Wrote **Python3** scripts to parse, compound, and analyze data in six-figure long Excel sheets using **openPyXL**
- Presented reports of analyzed data to the Director of Global Operations

RELEVANT PROJECTS

Season's Beatings May 2019
Unity, C#

- Top Down Beat 'em Up made in Unity in 4 weeks, served as **the primary gameplay programmer**
- Blueprinted and Implemented the weapon and combat systems of the game using Unity's C# scripting API; including controls, object interactivity, and balancing
- Formed a scalable system using Polymorphism and Unity Prefabs, which eased the workload during expansion

Crux Compiler April 2020 - June 2020
Java

- Wrote a compiler for a simple LLVM Language in **Java** called Crux
- Implemented a top-to-bottom compiler from grammar structure to x86_64 code generation using ANTLR4
- Developed the language to supports function definition, recursion, control flow structures, and strong typing with static scoping and variable shadowing

Macro-Nutrient Tracker August 2020
WPF (XAML + C#)

- Created a **GUI application** that tracks macro-nutrients and weight change for multiple users
- Utilized multiple **XAML** pages and a custom library to navigate through various data stored by the application
- Framed the system to automatically keep in sync with days of the week and store past data

Vocab Tiles October 2020
JavaScript (Node.js + Express)

- Developed A browser game for ESL students to match spoken vocab words with visual tiles
- Constructed the **Backend** with **Node.js**, **Express**, and **PostgreSQL**; formulated the schema for the Database
- Included Google Firebase and joi.dev to validate requests to preserve integrity of the Database

SKILLS AND AWARDS

Colorado Lottery 2020 Game Jam

- Team won 2nd place out of 208 participants
- Designed and Drafted a prototype for a monitor game to be played in bars and restaurants across Colorado

Programming Languages and Tools

- Proficient: C++, Unity Game Engine, C#, C, Java, Python3
- Familiar: JavaScript, Node.js + Express, Unreal Engine 4, Rust 2018, Go
- Environments: Visual Studio, JetBrains IDEs, Linux CLI

Interpersonal Skills

- Sociable, Adaptable to new Environments, Team Player
- Quick Learner, Clear Communicator, Passionate