

Josef Bertolini

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EDUCATION

UNIV. OF CALIFORNIA, IRVINE

BS IN COMPUTER SCIENCE

Focus: Systems and Software

BS IN COMPUTER GAME SCIENCE

Focus: Programming Languages

Dean's List: 2017 - 2020

GPA: 3.74 / 4.0

LINKS

Github:// [JosefBertolini](#)

LinkedIn:// [Josef Bertolini](#)

Steam:// [J03daSchm0](#)

Itch.io// [joebertolini](#)

COURSEWORK

Databases

Networking

Compilers

Artificial Intelligence

Analog Game Design

Video Game Development

Programming Styles

SKILLS

Advanced:

C++

Intermediate:

Java • Rust • Python3

Unity Editor • Unity's C# Scripting API

Familiar:

CSS • JavaScript • Unreal Engine 4

C • MySQL

AWARDS

Colorado Lottery 2020 Game Jam

Our team won 2nd place in a game jam for making a new Monitor Game. Our team received 2nd place out of 208 participants and 30 games, and the game itself will be played in actual bars and restaurants throughout Colorado.

PROJECTS

RAGING ROCKS | GAMEPLAY PROGRAMMER

Feb 2020 - Present | Unity + C#

- Online PvP hybrid of Angry Birds and W.O.R.M.S. for Android.
- **I am Designing and Implementing** controls, entity behavior, and game mechanics using Unity's C# scripting API.
- Working in a team of 5 as the **main gameplay programmer**.
- Open Source and will be released on the Play Store when finished

SEASON'S BEATINGS | GAMEPLAY PROGRAMMER

Feb 2019 - March 2019 | Unity + C#

- Top Down Beat 'em Up made in Unity in 4 weeks.
- **I completely Designed and Implemented** the weapon and combat systems of the game using Unity's C# scripting API, from controls to object interactivity to balancing.
- Worked in a team of 6 where I was the **main gameplay programmer**
- Open Source and able to download on my itch.io

CRUX COMPILER | PROGRAMMER

May 2020 - June 2020 | Java

- Wrote a compiler for a simple LLVM Language in **Java** called Crux.
- Implemented all levels of the compiler from grammar structure to x86_64 code generation using real world tools like ANTLR4.
- The language supports function definition, recursion, control flow structures, and strong typing with static scoping and variable shadowing.

PARALLEL RASTERIZER | PROGRAMMER

May 2020 | C++ 17

- Created a Ray Tracer that can trace primitive shapes in a scene.
- Used OOP principles and features from the **C++17** standard.
- Runs with an arbitrary amount of threads in parallel and avoids data races and deadlocks and is about 70% faster than the single threaded version.

WORK EXPERIENCE

KPX ENGINEERING | ASSISTANT DATA ANALYST

June 2019 - September 2019 | Irvine, CA

- Contracted by **KPX Engineering** to assist in a project pertaining to staffing and speed of service for Taco Bell Corp's International branch.
- My role was to write **Python3** scripts to compound and analyze the data using the **openPyXL** library.
- The data I gathered and analyzed was then presented to the Director of Global Operations.