## Natalie **Letz**

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#### Education

#### **University of Oregon**

B.S in Computer Science Expected graduation Q1 2020 CS GPA of 3.27

### Coursework

# Compiler Construction Computer Graphics

Scientific Visualization
Computer Architecture
C/C++ & Unix
Operating Systems
Programming Languages
Data Structures
Algorithms
Software Methodology

## Skills

## Programming Languages

C, C++, Java, Python, Bash, SQL, Assembly Language

HTML5, Thymeleaf, Spring, Dreamweaver

#### Other

Web

Adobe Photoshop,
Dreamweaver
Fluent in Spanish, Japanese
Excel, Google Sheets
Plenty Unix & Linux experience

## Work Experience

Where I've worked in the past

#### Pipeworks Studios | Software Engineering Intern

- Developed video games professionally on teams of varying sizes performing various tasks
- Worked on Adventure Academy, a children's MMO, and a yet-unannounced collectible card game
- Experience programming "enterprise software" in C#, Java, HTML,
   SQL, and JavaScript for all projects I worked with

#### IT Management | IT work for the UO Biology Department

- Managed the IT work for the University of Oregon Biology department
- Oversaw the management of over 100 computers, was responsible for software problems
- Trained new hires in all responsibilities required of staff

## Personal Projects

These projects can be found on my GitHub or personal website

#### Quack Compiler | Compiler for the Quack language

- Fully working compiler written for the Quack programming language
- Developed in C++ using tools such as RE-flex and Bison
- Uses techniques such as lexical analyzing, parsing, and type checking to compile down to C code
- Goes through stages: Source > AST > Type Checking > Code Generation to create an actual, running program

#### Pokémon Red Game Engine | An Engine Written in C++

- Started as a project for a Graphics Programming class University of Oregon, developed into something bigger
- Created an entire engine from scratch using C++ and a library called SFML, the engine works generally for Pokémon games
- Won a "Best Project" award for my project from local industry professionals working in game development

#### **Image Manipulator** | Passes images through various filters

- Described by my professor as "poor man's photoshop", it manipulates images in basic ways
- All the manipulations are done programmatically and the program operates through the command line
- Developed in C++ and is highly compartmentalized, organized, object-oriented