

# Cameron Clay

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<https://github.com/CameronClay>

<https://cc-portfolio-one.vercel.app>

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Lehi, UT, 84043

## Summary

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Motivated software developer, seeking a junior programmer/software engineer position in an environment that values quality and maintainable code.

## Education

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**Bachelor of Computer Science** - Utah Valley University, Orem, UT

*Aug 2016 - Dec 2020*

*Honors: summa cum laude (GPA: 3.97)*

## Work Experience

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**Computer Science Grader** - Utah Valley University, Orem, UT

*Aug 2019 - Dec 2019*

- Graded and provided feedback on students programs, lab exercises, and coding assignments
- Answered students' questions and assisted professor as needed

**Front Desk** - Comfort Inn, Lehi, UT

*June 2016 - Sept 2017*

- Answered phone, made reservations, and provided customer service both in person and over the phone
- Performed general maintenance (basic repairs, computer maintenance, and shampooing)
- Assisted housekeeping, maintenance, and the general manager

## Projects

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### Compiler

- Converts source code into assembly code
- Source code language is based on a hybrid of C# and C
- Supports inheritance, polymorphism, and multithreading
- Written in C++

### Assembler and Virtual Machine

- Converts assembly code into bytecode which can be run by the virtual machine
- Based on Reduced Instruction Set Computer (RISC) instruction Set Architecture (ISA)
- Supports multithreading
- Written in C++

### Client-server chat application

- GUI based application similar to IRC, with the ability to connect to a chat server to send and receive messages from server members
- Supports whiteboard
- Written in C++ using WNLIB

### **TCP-IP networking library [WNLIB]**

- TCP networking library which served as the base for writing a Client-Server chat application
- Written in C++ using Windows API and IO Completion Ports

### **Project portfolio website**

- Project portfolio website, built using React and Next.js (App Router & Server Actions), TypeScript, Tailwind CSS, Framer-Motion, React-Email & Nodemailer, React-Intersection-Observer, and Outsideclick-React

### **Discord bot**

- Elo bot for a SC2 arcade game, allows server members to join a queue to play against each other and generates a balanced team matchup based on player skill levels
- Written in Python using Discord.py and PostgreSQL

### **Dynamic functions library**

- Library which enables the ability to conditionally call functions at compile time based on the parameters passed, and enables those functions to be stored in statically-typed containers (such as an array/vector/arraylist)
- Written in C++ using template metaprogramming

## **Technical Skills**

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- Programming experience: C++ (advanced) C# with .NET framework (intermediate), Python (Intermediate), C (Intermediate), Rust (beginner), Java (beginner), SQL (beginner).
- Web technologies: HTML, CSS, JavaScript, TypeScript, React, Next.js, Node.js (beginner).
- Familiar with object oriented programming, programming principles, and software design patterns.
- Strong problem solving, debugging, and troubleshooting skills
- Source control/project management tools: Git, Atlassian, Jira, Team Foundation Server
- Operating systems/software: Windows, Linux, Visual Studio, Visual Studio Code, Docker, CMake, Qt
- Confident working in agile teams and individually
- Familiar with Continuous Integration/Continuous Deployment (CI/CD) and tools such as Bitbucket pipelines and Jenkins
- Familiar with databases, computer architecture, and computer networks
- Familiar with unit testing, integration testing, and test driven development
- Familiar with game development