Keegan Sanchez

Vancouver, WA | (360) 909-1769 | keegan.sanchez@wsu.edu | *https://github.com/Lurgypai*

Education

Washington State University   **B.S. Computer Science**
Outstanding Student in Computer Science
Class of May 2022

Washington State University   **Seeking M.S. Computer Science**
Class of May 2024

Programming Experience

I began programming as a hobbyist in 2013. Since then I've experimented with all kinds of different programming languages, tools, and paradigms. I've always focused primarily on C++, but am confident in my skills in the other areas listed. I've made a few simple HTML sites with JavaScript and CSS, but would consider these as creative endeavors, not an endorsement of my web development skills.

Tools I'm Comfortable Working With: Visual Studio, Eclipse, IntelliJ, PyCharm, Vim, CMake, Git

Languages I'm Comfortable Working In: C++, C, Lua, Python, Java

Work Experience

WSU Vancouver / Research Assistant (May 2021 – Current)
Researching solid state firmware using VSSIM and the OpenSSD FPGA platform. Implemented custom FTL and buffer management algorithms.

Lawrence Berkeley National Laboratory / Visiting Faculty Program (June 2022 – August 2022)
Worked with LBNL to develop modificatinos to the MPICH implementation of MPI to use persistent memory. Research is being continued at WSU Vancouver.

ArcaneMC / Independent Developer (June 2017 – February 2018)
Commission based work building server plugins for Minecraft. Collaborated with a team of developers using Slack and BitBucket in conjunction with Git to manage development.

Personal Projects

I have worked on a variety of personal projects, across a variety of domains. These and many more are available at https://github.com/Lurgypai.

rummagesale.net (2020 – Present, *http://rummagesale.net*) Developing a custom website from scratch working with HTML and CSS. Learning to host on an Ubuntu server using and Apache HTTP Server. Designing interesting layouts with cohesive formatting.

Suqua (2018 – Present, *https://github.com/Lurgypai/Suqua*) Writing 2d online multiplayer networking libraries using C++, SDL, OpenGL, and ENET. Learned to use sockets, serialize/unserialize data for network transfer. Wrote an authoritative server network model, including client-side prediction and rollback. Wrote the graphics engine, which interfaces directly with OpenGL. Learned to effectively buffer data to the GPU, as well as how to write vertex and fragment shaders. Learned to use compute shaders to handle a simple particle system. Cross platform on Windows and Linux using CMake to manage build systems.