Carlos Miguel **Sayao**

Computer Science · Software Engineer

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Education

Portland State University — *Portland, OR*

B.S. in Computer Science with a Minor in Physics — *2014 - 2020*

Clark Community College — *Vancouver, WA*

Associate of Arts — *2009 - 2013*

Technical Profile

Programming	Python, C/C++, Java, JavaScript, Bash, SQL, MIPS/x86, LaTeX
Machine Learning	Scikit-learn, Numpy, Pandas, NLTK, Matplotlib
Web Development	HTML, CSS, jQuery, Bootstrap, Node, Express, Flask, React, Google Cloud Platform
Platforms and Tools	Linux, Windows, Vim, VSCode, PDB, GDB, Git

Experience

Portland State University — *Portland, OR*

Student Grader — *Sept 2019 - Mar 2020*

- Courses covered HTML5, CSS, HTTP, JavaScript (ES6), Node, Express, React, and other various libraries, frameworks, and APIs.
- Work was focused on evaluating student assignments and projects.
- Delivered constructive feedback and tips to students struggling with assignments.
- Managed student concerns and inquiries concerning technical and academic issues.

Dual-Pi DJ Visual Assistant (Pi-Visualizer), Portland State University — *Portland, OR*

Software Engineer — *Sept 2019 - Mar 2020*

Pi-Vis is part of an art installation to be featured at Burning Man. Written in Python, the multi-threaded program makes extensive use of Socket programming and command line scripting.

- Wrote communication protocols to be fast and consistent.
- Designed architecture to withstand harsh environments, minimize probability for failure, and provide users with easy interface and deployment.
- Developed redundancy—Pis can be swapped on the fly without disruption to playback.
- Developed reliability—Errors handled by the system during the approx. 12hr run time.

Analysis of NEAT, Portland State University — *Portland, OR*

Machine Learning Researcher — *Feb 2020 - Mar 2020*

An analysis of the genetic algorithm, NeuroEvolution of Augmenting Topologies (NEAT) developed by Ken Stanley in 2002 at UT Austin.

- Tested the validity of NEAT components, along with compared its performance to Q-Learning.
- Tested components in OpenAI Gym environments to test complex decision making.
- Found results consistent to author's claims in research paper.

Lonr, Personal Project — *Portland, OR*

Software Developer — *Jun 2019 - Aug 2019*

Web-chat app generates Markov models from corpora to simulate conversation with notable comedians.

- Built frontend using Flask, HTML, CSS, Bootstrap for clean, simple look.
- Built backend using Flask-SocketIO to establish low latency two-way communication between client and server.
- Modified Python library, Markovify, to generate a more robust response message.

DSHS of Washington — *Vancouver, WA*

Home Care Aid — *Jun 2016 - Present*

Free Geek — *Portland, OR*

Volunteer — *Sept 2011 - Present*

City of Vancouver — *Vancouver, WA*

Lifeguard & Camp Counselor — *Jun 2011 - Sep 2015*