

# Carlos Miguel Sayao

COMPUTER SCIENCE · SOFTWARE ENGINEER

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## Education

### Portland State University

B.S. IN COMPUTER SCIENCE WITH A MINOR IN PHYSICS

GPA: 3.01

Portland, OR

2014 - 2020

## Technical Profile

**Programming** Python, C/C++, Java, JavaScript, TypeScript, Bash, SQL, MIPS/x86, LaTeX

**Machine Learning** Scikit-learn, Keras, Numpy, Pandas, NLTK, Matplotlib, Seaborn

**Web Development** HTML, CSS, jQuery, Bootstrap, Node, Express, Flask, React, Ionic Framework, Google Cloud Platform

**Platforms and Tools** Linux, Windows, Vim, VSCode, PDB, GDB, Git, Android Studio, Agile, Scrum, Jira

## Experience

### Open Source Mobile City App (<https://github.com/jldle/North-Plains-App>)

WEB DEVELOPER

Open source Android and iOS app to mirror a client city's website.

- Designed pages using Ionic React Framework.
- Built rudimentary API calls to fetch JSON and populate pages.

Portland, OR

June 2020 - Present

### Dual-Pi DJ Visual Assistant (Pi-Visualizer), PSU ([gitlab.com/madelyea/team-visualizer](https://gitlab.com/madelyea/team-visualizer))

SOFTWARE ENGINEER

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 to sync video playback between two Raspberry Pis.

- 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.

Portland, OR

Sept 2019 - Mar 2020

### Web Development, PSU

STUDENT GRADER

- 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.

Portland, OR

Sept 2019 - Mar 2020

### Lonr (<https://github.com/carsayao/lonr>)

WEB DEVELOPMENT/MACHINE LEARNING

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.

Portland, OR

Jun 2019 - Aug 2019

### DSHS of Washington

HOME CARE AID

Vancouver, WA

Jun 2016 - Present

### Free Geek

VOLUNTEER

Portland, OR

Sept 2011 - Present

### City of Vancouver

LIFEGUARD & CAMP COUNSELOR

Vancouver, WA

Jun 2011 - Sep 2015