Violet Chan

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Skills

OS	Linux, MacOS, Windows
Programming	shell scripting (bash), C/C++, Python, Javascript, SQL, MIPS assembly, Dyalog APL, HTML+CSS
Tools/Libraries	flask, Beautifulsoup, yacc + bison, PEGlib, Microsoft Office, git and github, Zola
Design and Layout	Adobe Illustrator, Adobe Photoshop, Inkscape, Blender3d, CAD, Markdown, Lyx, Latex, Figma
Additional	Creative and technical writing, live presentation, improvisation and troubleshooting.

Experience

2025-ongoing **Fellow**, *Nten Open Source Fellowship*, Portland, OR
- Agile flavored project management techniques
- Project management software (Asana, Confluence, etc)
- Outreach to other organizations
- Software development planning and execution
- Organizing conference demonstrations
- Writing copy for web

2026-ongoing **Facilitator**, *local non-profit*, Portland, OR
- Create a welcoming and supportive environment
- Identify community needs
- purchase equipment to fulfill community needs

2025-ongoing **Educator**, *MMT Prep*, Bethany, OR
- Develop individualized plans on the fly to address student engagement and weak points
- Rapidly infer student's knowledge level and confidence
- Adapt planned curricula to individual student needs
- Use white-board and electronic teaching techniques

2023-ongoing **Instructor**, *Coding with Kids*, Portland, OR
- Present technical knowledge for various levels of experience
- Notice and respond to student emotional state
- Manage class equipment
- Improvise and problem solve on the fly to meet student needs and solve technical issues

2019-2023 **Tutor**, *Reed College*, Portland, OR
- Improved college student outcomes in mathematical analysis and Python
- Taught course material and introduced students to tools and techniques for independent study
- Engineered materials introducing students to structured programming

Education

2018-2023 **Bachelor of Arts in the Faculty of Computer Science**, *Reed College*, Portland, Oregon

Thesis

Session Typing and Checking using State Minimization, A study into analysing concurrent computation via the process calculus and session types. Included design of a process calculus based language and its type checking system.

Projects

EdPyler

- A language I designed for use with the Edison robotics platform, inspired by Logo
- Parser built using the Parsing Expression Grammar formalism
- transpiles custom code to Python code that can be flashed to an Edison robot

Website for local band

- created a fully static site
- Designed the font, and logo to match the band's style
- antisepticide.neocities.org

Website Decompilation

- Used the Beautiful Soup Python library
- Decompiled a downloaded copy of my personal site to it's orginal markdown files
- Recovered my website from lost source material

Lambda Compiler

- A compiler and interpreter hand written in python
- Written as a study of how compilers operate, focussed on functions and name management
- later rewrites to study syntax tree transformers and error checking

Food Finder App

- Worked in a design team to build an interface
- used Figma to design an interactive dummy interface
- Conducted surveys and usability testing to validate our design

Static Site Generator

- Used Bash scripting
- Designed a recursive directory crawling template engine
- built to require minimal overhead and minimal additional files

Js Beats

- an interpreter built in javascript to run in the browser
- hand coded lexer, parser, abstract syntax tree evaluator
- Built a web interface with error checking and highlighting

Personal Site

- created a fully static site
- contributed to the theme design on github
- used Zola static site generator with Tera template engine

Relevant Coursework

- Algorithms and Data Structures
- Fundamentals of Programming Languages
- Computability and Complexity
- Introduction to Compilers
- Computer Sysytems
- Creative Writing
- Discrete Mathematics
- Vector Calculus
- Usability engineering