Violet Chan

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Skills

OS	Linux, MacOS, Windows
Programming	shell scripting (bash/zsh), 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.

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 Decompilation
- Used the Beautiful Soup Python library
- Decompiled an archive 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 in multiple phases as a study into how compilers operate with a focus on functions and name management
- later passes used 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

Experience

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

Relevant Coursework

- Algorithms and Data Structures
- usability engineering
- Computer Sysytems