

CHARLES BOLTON

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PROGRAMMING PROJECTS:

RESTful API and Spreadsheet Parser:

Python, Pandas, Jupyter, Excel, Flask, Postman, JSON, Matplotlib

Project completed as capstone for PSU. Internship with ecommerce consulting company The Good. Worked with a strategist and two software developers over the course of five months. Data wrangling from spreadsheets to database to API.

Ear Trainer:

Python, DFT, DSP

Exploration into the physical foundations of music, digital signal processing, and waveform generation, composition, and decomposition. Created over 5000 .wav files of sine, square, saw, and triangle waves, and combined them in many musical ways, then wrote a Discrete Fourier Transform which listened to the combined waves and parsed them. Turned the project into a game/practice tool for audio engineers and musicians.

TCP IRC Chatroom:

Python, Asyncio

Experiment in internetworking protocols; an asynchronous client/server chat application which supports multiple clients, chat room creation, deletion, joining, switching, leaving, broadcasting, as well as other functions relating to connections and disconnections. Two-person student project.

SFTP Client:

Java, Agile, Github, OOP, SFTP

SFTP client written in Java as an exercise in Java Networking using Agile (XP) software development as a guiding process. Team of six engineers developing application for secure file transfer protocol with numerous functions.

Appointment Manager:

Java, OOP, TDD, Android, HTTP

8-week, iterative/evolving project focused on developing Android application for managing appointments. Included 6 projects focused on test-driven development and OOP; culminated in fully-functional Android application which resembled Wunderlist.

EDUCATION:

- Current:** Graduate Student in Computer Science
Portland State University (Portland, OR)
- 2018:** Accelerated Undergraduate Computer Science
Portland State University (Portland, OR)
- 2017:** Sonic Arts/Audio Engineering
Portland Community College (Portland, OR)
- 2015:** Post-Baccalaureate Inquiry World History, Politics, Economics
Portland State University (Portland, OR)
- 2014:** Mandarin Chinese HSK 5 and Advanced Oral HSK Certification
Confucius Institute/Hanban (Portland, OR)
- 2005-2009:** Bachelor of Arts in English Literature
Portland State University (Portland, OR)
ESL Certification (Portland, OR)

EMPLOYMENT:

- 2016:** Andeo Homestays (Portland, OR)
ESL Teacher
- 2015-2016:** Private Mandarin Teacher (Portland, OR)
- 2014:** METEN English (Chongqing, China)
ESL Teacher
- 2010-2011:** Expertise Education (Beijing, China)
Kindergarten ESL Teacher
- 2007-2018:** Townshend's Tea (Portland, OR)
Server, Warehouse Management, etc.

OTHER:

English, Chinese, Spanish, C, C++, Python, Haskell, Java, Javascript
Interests: Music, History, World, Art, Math, Economics, Writing, Philosophy

GRANTS/HONORS:

Idaho Falls High School: Summa Cum Laude
Idaho Top Scholar 2005 recipient
Confucius Institute: Scholarship for 1 year study in China (2014)