Josh Lin

Portfolio: https://linynjosh.github.io/

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

BSc in Computer Science

Sept 2020 — May 2024 | Vancouver, Canada

LINKS + INFO

- 🌐 https://linynjosh.github.io/
- ✉ linynjosh@gmail.com
- linynjosh
- in Josh Lin

SKILLS

PROGRAMMING

Python • Java • JS • LaTeX • HTML • CSS • C++ • C • SQL

TOOLS

Git • Jupyter Notebook
Plotly • pandas • Heroku

INTERESTS

PROGRAMMING

Data visualization• Data analysis
Web design • Software Construction

EXTRACURRICULAR

Basketball • Violin

COURSEWORK

COMPUTER SCIENCE

Computation, Programs, and Programming *(Challenged with 100%)*
Models of Computation
Software Construction
Basic Algorithms and Data Structures
Introduction to Computer Systems
Introduction to Software Engineering
Intermediate Algorithm Design and Analysis
Introduction to Relational Databases

MATHEMATICS

Differential Calculus/Integral Calculus
Multi variable Calculus
Matrix Algebra Linear Systems

WORK EXPERIENCE

UNDERGRAD COMPUTER LAB IT ASSISTANT

Summer 2021 • UBC Faculty of Forestry

- Worked for the Faculty of Forestry to install PC hardware/software while running hardware diagnostics to evaluate hardware health.
- Learned general Knowledge of Active Directory, Group Policy Objects and Preferences in addition to basic understanding of TCP/IP and VLAN networks.

PROJECTS

FLOOD FILL

Sept – Dec 2021 • code link

A code that executes a "flood fill" on a PNG image when specified a point on the image and a fill color.

- Implemented a stack and queue class that have an amortized runtime of $O(1)$ per operation.
- Implemented a flood-fill algorithm that uses breadth-first-search and depth-first-search to create fill algorithms to fill images with rainbow, solid, gradient, and grid fill patterns.

TODO-APPLICATION

Jan – May 2021 • code link

A planner app that manages different tasks by categorizing them according to their corresponding due dates or tags.

- Included functionalities to add, remove, and view tasks and reminders.
- Called APIs to read in daily weather and news data from **openweathermap.org** and **newsapi.org** according to the user's scanner input.
- Parsed weather and news data stored in JSON files with the JSON.simple library in Java.
- Added data persistence to save and load todo list from file.

CRIME AND DEMOGRAPHICS: NYC

May – Jun 2020 • web app link

A web app visualizing the demographics of 5+ million crimes in New York City.

- Filtered dataset based on the offender's race, gender, age, offense, crime location, and date using Python and pandas.
- Implemented the KMeans clustering algorithm in Scikit-learn to categorize crimes by regions and differentiate districts with high crime density.
- Built web app using streamlit and deployed with Heroku.
- **Utilized**: pandas, Plotly, streamlit, Heroku, Scikit-learn

THE SATELLITES RACE: ROUND 1

Mar – Apr 2020 • web app link

A web app visualizing the increase in number of satellites launched since 1975.

- Used Python and pandas to categorize each satellite by its purpose – military, civil, commercial, and government, and by its country of ownership.
- Built visualization dashboard displaying interactive graphs with Plotly and Dash. Deployed with Heroku.
- **Utilized**: Plotly, Jupyter Notebook, Dash, Heroku