

# Josh Lin

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

## EDUCATION

**UNIVERSITY OF  
BRITISH COLUMBIA**  
BASC IN ENGINEERING  
Sept 2020 — May 2024 |  
Vancouver, Canada

## LINKS + INFO

🌐 <https://linynjosh.github.io/>  
✉ [linynjosh@gmail.com](mailto:linynjosh@gmail.com)  
🎧 linynjosh  
in Josh Lin

## SKILLS

### PROGRAMMING

Python • Java  
L<sup>A</sup>T<sub>E</sub>X • HTML • CSS

### TOOLS

Git • Jupyter Notebook  
Plotly • pandas • Heroku

## INTERESTS

### PROGRAMMING

Data visualization • Data analysis  
Web design

### EXTRACURRICULAR

Basketball • Violin

## COURSEWORK

### COMPUTER SCIENCE

Computation, Programs,  
and Programming  
(Challenged with 100%)  
Models of Computation  
Software Construction  
Mechanics

### MATHEMATICS

Differential Calculus  
Integral Calculus  
Matrix Algebra  
Linear Systems

## EXPERIENCE

### UBC ENGINEERING PHYSICS PROJECT LAB

Summer 2017, 2018, 2019 • Lab Assistant Volunteer

- Volunteered for Engineering Physics Robot Competitions deconstructing past robots to salvage motors, electrical boards, and batteries.
- Worked with the lab director for three summers to machine and assemble competition platforms.

## PROJECTS

### TODO-APPLICATION

Jun – Jul 2020 • [code link](#)

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

- Included functionalities to add task, remove task, view tasks, and check daily reminders.
- Called APIs to read in daily weather and news data from [openweathermap.org](https://openweathermap.org) and [newsapi.org](https://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.

### 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.
- Created interactive graphs with Plotly visualizing the frequency of crimes as a function of the variables above.
- Built web app using streamlit and deployed with Heroku.
- **Utilized:** pandas, Plotly, streamlit, Heroku, Scikit-learn

### EARTHQUAKE EFFECTS

Apr – May 2020 • [website link](#)

A website visualizing the effects of major international earthquakes since 1993.

- Utilized Python and pandas to clean dataset and extract entries containing earthquake location, year, magnitude, depth and damage caused.
- Designed a central web page using HTML and CSS with links to Kepler.GL visualizations of extracted parameters. Hosted with github pages.
- **Utilized:** Jupyter Notebook, pandas, HTML, CSS, Kepler.GL, github pages

### 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