

Billy Shi

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Education

- **Simon Fraser University**

Bachelor of Science in Computer Science; CGPA: 3.64 (Dean's Honor Roll)

Burnaby, BC

May 2021 – Dec 2024 Expected

Projects

- **Friend Bill Splitter**

Node.js, React, Firebase, HTML, TailWindCSS

Feb 2024 - Present

- **Web App for Bill Splitting:** Developed a web application designed to simplify bill splitting among friends, utilizing Node.js for the backend and Firebase for database management of bills.
- **Database Design & User Features:** : Integrated user authentication and bill management, supporting bill creation, editing, and payer/payee assignments. Offers detailed summaries for clear payment breakdowns among users.

- **StuddiBuddi**

Android Studio, Kotlin, Firebase

Mobile Development, SFU

Sep 2023 - Dec 2023

- **Android App for Study Group:** Worked in a team to build an android app that facilitates student connections for study group sessions via an interactive map..
- **Database & Functionality:** Designed and built the app's database, also introduced a pin feature for users to create and locate study sessions on a map with optional filter, including a chat function among groups.

- **Million Song Dataset**

Python, PySpark, NumPy, Pandas

Computational Data Science, SFU

Oct 2022 - Dec 2022

- **Comprehensive Dataset Analysis:** Collaborated with a team to conduct a comprehensive analysis of the Million Song Dataset, utilizing the SFU computational cluster to identify distinct song genres.
- **AWS Data Retrieval:** Utilized AWS EC2 instances for downloading and staging of the dataset in prepare for analysis.
- **Data Preprocessing:** Applied data cleaning and extraction with NumPy, visualized and inspected data columns with Matplotlib and deployed statistical functions accordingly to normalize data.
- **Pyspark Cluster Development:** Analyzed the dataset using PySpark kMeans machine learning pipeline on SFU cluster, integrating feature vector assembly for robust statistical testing.
- **Result Visualization:** Employed PCA for the visualization of analysis results in both 2D and 3D using seaborn, effectively illustrating the underlying patterns and hypotheses.

- **Storybook**

Android Studio, Java, Firebase

Introduction to Software Engineering, SFU

June 2022 - Aug 2022

- **Android App for Dementia Support:** Led the development of a Java-based Android application aimed at aiding memory recovery in dementia patients, enabling online content editing by caregivers.
- **Firebase Implementation:** Engineered a scalable database using Firebase for user account management and authentication, integrated cloud storage for multimedia content, enhancing data security and accessibility.
- **Agile Project Management:** Followed agile methodologies, dividing the development process into three sprints to efficiently plan and execute feature releases, enhancing team productivity and project delivery.

Volunteer Experience

- **Gluxkind**

Data Collection & Processing

Vancouver BC

May 2022 - July 2022

- **Data Collection:** Collected the training data through real-world simulation, designed to accurately emulate pedestrian scenarios for autonomous navigation.
- **Image Annotation:** Employed the Computer Vision Annotation Tool for image labeling, enabling precise object recognition by training algorithms. Identified and rectified mislabeled model results.

Programming Skills

● **Languages:** Python, Java, Javascript, C++, C, SQL, Java, Matlab

Technologies: PyTorch, Scikit-learn, Unity, Docker, Slurm, Node.js, React, Django