

Billy Shi

Burnaby, BC 236-788-9600 isa84@sfu.ca GitHub.com/BillySh1

Technical Skills

- C++
- Java
- Python
- Git
- NoSQL database (Firebase)
- Pyspark
- Node.js
- React Native
- Android Studio (Java)
- PyTorch
- MSSQL
- Linux
- x86 Assembly
- Adobe After Effects
- Adobe Photo Shop
- Matlab
- Docker
- Mac OS, Windows

Technical Projects

Million Song Dataset Analysis

Oct - Dec 2022

Computational Data Science, SFU

- Analyzed the Million Song Dataset with a group of two using SFU cluster computer to find the number of groups existed in the songs.
- Downloaded the dataset from AWS using EC2 virtual machine used for the data analysis.
- Cleaned and extracted the dataset with pyspark preprocessing functions and statistic evaluations on the data to ensure normal distribution of the data.
- Analyzed the dataset on the cloud cluster computer using pipeline of pyspark machine learning features and vector assemble functions for statistic test.
- Evaluated the p-values with different values of k-means to find the number of groups of the songs.
- Plotted the results with PCA in both 2D and 3D to conclude and visualize the hypothesis.

Website: <https://github.sfu.ca/cfa60/cmpt353-million-song-dataset>

Storybook

June - Aug 2022

Introduction to Software Engineering, SFU

- Developed in Android Studio using Java with a group of four to help dementia patients with memory recovery and provides online edit features for the caretakers.
- Created and designed the database with NoSQL database Firestore from Firebase for the APP to store accounts information and cloud storage for photos and videos.
- Devised the solution for syncing with the database, receiving real-time feedback and APP usability without internet to optimize UX.
- Implemented and designed the creation of family member entries with information, avatar and their links to the medias for the APP users to interact with.
- Designed UI with layout files (.xml) with the advises from different groups of testers, maximums the experience of its aimed users.
- Followed the agile project management, by separating the project into three quick sprints, planned ahead features in each release for maximum teamwork and efficiency.

Website: <https://github.com/BillySh1/276Project>

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Technical Volunteer Experience

Data Collector

May - July 2022

Gluxkind, Vancouver BC

- Collected training data using a dual camera to mimic the walking scenario of the stroller for its vision training.
- Labeled the captured picture using the Computer Vision Annotation Tool with different layers for the machine to distinguish.
- Picked out the wrongly labeled parts from the video generated by the trained model to revise the training model.

Other Project

Catch Me if You Can

Nov 2021

Digital Image Design, SFU

- Animated a short movie in After Effects in two weeks out of scratch without any online resources besides the soundtrack, received full marks from the instructor.
- Built the animations by following the motion principle to make them natural and smooth.

Website: <https://youtu.be/R27JoF9swew>

Other Work Experience

Produce Department Associate

Nov 2022 - Feb 2023

T&T supermarket, Burnaby BC

- Stocked fruits flexibly depending on the current customer needs and shifted slots to fit different fruits to satisfy the customer needs and stock availability.
- Solved customers' inquiries patiently with proper approaches to maximize customers satisfaction.

Education

Simon Fraser University

May 2020 - Present

Burnaby BC

- BSc. Computer Science
- CGPA: 3.57 / 4.33