Sunny Deng

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🎓 Education

University of Victoria   Jan. 2021 – Present
M.Eng. Applied Data Science GPA: 3.9/4.0   *Victoria, BC*

Wilfrid Laurier University   Sept. 2016 – Aug. 2020
BA. Mathematics, Concentration in Statistics and Data Analytics   *Waterloo, ON*

⚙ Technical Skills

Languages   Python, R, Matlab, SAS, Java

Machine Learning   Scikit-learn, Keras, Pytorch

Database   MySQL, DynamoDB

Visualization   Plotly, Matplotlib, Seaborn, Tableau

Tools   Git, VS Code, Docker, AWS

🥧 Experience

Wilfrid Laurier University   Sept. 2019 – April. 2020
Undergraduate Research Assistant   *Waterloo, ON*

> Analyzed the pattern of weather dataset in **R** to predict future extreme weather events.
> Trained LDA, QDA, Decision Tree and Random Forest models.
> Evaluated models' performance and reached approximately **80 % accuracy**.

⚗ Projects

Face Mask Covering Detection   May. 2021 – Aug. 2021

> Developed a detection tool for **face mask covering**.
> Trained **Convolutional Neural Network** with **Keras**.
> Utilized **YoloV4 and Faster RCNN** for mask detection.

BattleSnake Bot   May. 2021 – Aug. 2021

> Competed the Battlesnake in a group of 3 people.
> Deployed the snake by **Reinforcement Learning** using Amazon SageMaker.
> Deployed the snake by AlphaZeroSnake using **Monte Carlo Tree Search**.

Machine Learning Algorithms Tool   Jan. 2021 – Aug. 2021

> Implemented common **Supervised Learning** and **Unsupervised Learning** algorithms from scratch in Python.
> Implemented and evaluated performance of **Principal Component Analysis** and **Fisher Analysis**.
> Developed a simple search engineer using **cosine similarity** that display the most relevant documents.

SQL Tool for Movie Sales Report   May. 2019 – June. 2019

> Designed and developed inventory reports to track and monitor product availability at each store.
> Provided organized data to support business decisions on replenishment strategies.
> Queried data from database by using **advanced SQL skills**.