

Simeng Yang

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EXPERIENCE

Facebook | [Software Engineering Intern](#) | Sept – Dec 2020

- Developed ML models to improve product relevance on Instagram Shopping by predicting users' preferred product categories in **Python**
- Built and validated extensible infrastructure to support offline predictions, enabling analysis of cold-start users
- Boosted querying rate of model predictions by up to 500x by tuning and parallelizing **Spark** transformers

Microsoft | [Software Engineering Intern](#) | Jan – Apr 2020

- Decreased end-to-end pipeline runtime by 30% and memory footprint by 20% across thousands of machine learning scenarios in Microsoft's AI Builder platform via dimensionality reduction in **Python** and **Spark**
- Enhanced telemetry with richer data profiling to gain actionable insights on user engagement and model quality
- Enabled users to compose and import custom pipelines by leveraging MIT's open-source MLBlocks framework [↗](#)

Broadway Technology | [Software Engineering Intern](#) | May – Aug 2019

- Developed support for a new class of bonds required by a major client within Broadway's trade execution and querying system using **C++** and **Python**
- Revamped trade times to microsecond precision by overhauling **C++** code to the latest FIX trading protocol
- Reduced code complexity by refactoring Broadway's trading platform to use generic libraries / variadic templates

SnapTravel | [Software Engineering Intern](#) | Sept – Dec 2018

- Profited an estimated sales impact of \$2M USD by developing a loyalty rewards **Flask** microservice to incentivize business travelers
- Saved team 50+ hours / week by implementing a PDF library to autogenerate and upload invoices in **Python**

Novus Health | [Software Engineering Intern](#) | Jan – Apr 2018

- Decreased turnaround for crafting questionnaires from 6+ hours to 3 minutes by implementing a drag-and-drop builder using **React** / **Redux**
- Reduced database update times by 40% by composing and automating data import tools in **PHP** and **SQL**

EDUCATION

University of Waterloo | [Bachelor of Computer Science](#) | Sept 2016 – Dec 2020

- Coursework on Machine Learning, Artificial Intelligence, Algorithms, Operating Systems, Computer Networks

PROJECTS

Game Jam Score Classifier [↗](#) [Top 6/123 in Kaggle Competition](#)

- Implemented a LightGBM model to predict scores of game entries in the Ludum Dare Game Jam in **Python**
- Achieved a 0.932 classification accuracy through careful feature engineering and feature selection

3D Dogfighter [↗](#) ["Most Over-the-Top" Prize Winner at Waterloo Game Jam 2017](#)

- Developed a multiplayer aerial combat game in **C#** with **Unity**
- Integrated server networking logic with matchmaking system for hosting 20+ concurrent players

SKILLS

Languages:

Python, C++, Java, JavaScript (ES6), C#, SQL, R, PHP, Bash

Frameworks/Tools:

PyTorch, Keras, Spark, Pandas, NumPy, Jupyter, AWS, Docker, Redis, Linux, Git