Yifei Yin

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Self-Driven Software Engineer & FinOps Practitioner with Platforming, Data Engineering and ML/AI Research Experience
Diverse experience in Startups, Unicorn, Enterprise, Academia

WORK EXPERIENCE

Sophos *[Software Engineer -> Senior]* February 2022 – Present

- Architected **Data Lakehouse ETL** with Modern Data Stack (**Airbyte** + **dbt** + **Airflow**) to support **FinOps** Big Data
- Designed scalable solution (100s of tables) that streams 100sGB Cloud Cost data with **Superset** + **Quicksight**
- Led the transformation from **OLTP** to **OLAP** data warehousing that sped up data processing by 100x
- Supported **Engineering Directors** in high-profile **Cost Optimization** initiatives that saved **$Millions/month**
- Tech: **Pandas, GLUE, Athena/Presto/Trino, S3, Redshift, Postgres, ECS, Flask, OLAP, OLTP, SQL, Python, dbt, Airflow, AWS, Lambda, Parquet, GitHub Actions CI/CD, Docker**

Super.com *[Software Engineer]* April 2021 – February 2022

- Maintained a **high-performance search engine** in Python that handles 1000+ QPS with 99.9+% uptime
- Improved data ingestion on **Airflow** and **AWS**, shortened ingestion from two months to 4 days without cost increase
- Integrated multiple external **APIs** with existing backend/data services being **used by millions of users per month**
- Developed risk-evaluation **machine learning** engine which has helped to save hundreds of malicious price attacks
- Modeled user behavior with **ensembled Neural Networks** in **PyTorch** that predicted transactions at 98% accuracy

WaiveTheWait *[Co-founder]* April 2019 – March 2021

- A medical clinic software that helps clinic to operate more efficiently by reducing operating friction
- Served ~10k system transactions daily with asynchronous thread design in **Python Django** + **NGINX** on **Docker (GCP)**
- Researched Machine Learning model for wait time estimation in **PyTorch**, 9% MAPE (State-Of-The-Art)
- Built **REST** API interfaces for integration with top medical software (OSCAR, AccuroEMR) with **OOP** design
- Competed and won $21,250 funding from the **QICSI pitch competition**; accepted to the famous incubator - **NEXT36**

Research/Projects

Big-Data Analytics and Management Lab, Queen's University *[NLP Researcher]* March 2019 – July 2020

- Designed neural networks with human-right violation prediction accuracy at 91.7% (State-Of-The-Art)
- Published at **PICom2020 International IEEE Conference** and received the **Best Student Paper Award**
- Innovated BERT (**TensorFlow**) for legal outcome prediction on ECHR unstructured corpus, F1=86.7 (State-Of-The-Art)
- Designed custom Hard Drive data structure, which allowed model fine-tuning training process to be 40 times faster

Reinforcement Learning Course *[Course Project]* February 2020 – May 2020

- Developed a Deep Convolutional Network (**CNN**) to finish the Super Mario Game in **PyTorch**
- Optimized RAM efficiency for Double Deep Q-Learning to increase training speed by 30 times

Neural Networks and Cognitive Models Course *[Course Project]* February 2019 – May 2019

- Implemented **RNN** and **CNN** with Attention in TensorFlow for Hanzi recognition with 92.5% accuracy
- Deciphered binary stoke information from a handwritten collector to python object representations
- Optimized parameter size to achieve more than 40% speedup in model training with minimal performance penalty

Queen's To Go *[Project]* April 2018 – December 2019

- Created and published Android app which was **Google Play Store Top 5 Trending Tools, Top 50 Movers & Shakers**
- Marketed and maintained/updated the application for 2 years using **Android Studio** and **Java**
- Designed the application backend for storage and processing and optimized for a wide range of android devices

EDUCATION

Queen's University **Class of 2020**

- B.Sc. (Honours) Computer Science – Artificial Intelligence Specialization
- GPA 3.95, Dean's Honors List with distinction
- Student Union Exec | Neuroscience Conference Exec | Queen's Machine Intelligence and Design Team QMIND Exec