

Tianye Song

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EDUCATION

Carnegie Mellon University - Master of Science in **Information Systems Management**, GPA: 3.75/4.0

Expected 12/2022

Xiamen University - Bachelor of Economics in **Finance**, GPA: 3.8/4.0

06/2020

• **University of Oxford** - Winter Exchange Student, GPA: 4.0/4.0

TECHNICAL SKILLS

Programming Languages: Python, SQL, Java, R

Tools: Pytorch, Tensorflow, Scikit-learn, Spark, Hive, RAPIDS, Dask, MySQL, MongoDB, Docker, AWS, Tableau, Kafka, Pandas

WORK EXPERIENCE

Walmart - *Data Engineer Intern*

Dallas, TX | 05/2022–08/2022

- Implemented accelerated computing and transferred feature engineering and modeling process from CPU, which originally using pandas and Spark, to GPU distributed computing with RAPIDS cuDF and Dask on web-scale data; Increased the speed by 10 times
- Collaborated with NVIDIA to contribute to RAPIDS, an open-source suite of GPU accelerated libraries in Python, by refactoring and generalizing data analysis, data pipeline and modeling functions

Trace - *Co-Founder*

Shanghai, China | 12/2021 - now

- Constructed a digital identity network in the form of IOS application for Z generation with stories to help them discover, record and share different aspects of themselves and connect similar people.
- Qualified for seed round funding of Y Combinator China, a technology startup accelerator that has been used to launch more than 3,000 companies including Stripe, Airbnb (top 2% of 1000 companies)

Meritco Services Technology Consulting Firm - *Data Scientist (Full Time)*

Shanghai, China | 07/2020–07/2021

- Designed and engineered interactive tool-chains for manufacturing planning including integrating data from multiple sources, building sales prediction model and visualizing indexes through dashboard; lifted prediction accuracy by 50%
- Boosted key function of Key Opinion Leader product by recognizing cosmetic product name and feature automatically with NLP algorithms; achieved 87% accuracy and simultaneously saved 80% of time
- Orchestrated multiple promotion opportunities for companies by analyzing big data with Python and SQL; increased conversion rate by 5%; facilitated customer relationship management process with model and increased ROI by 7%
- Simplified sku name matching tools with XGBoost and shortened generation time from 5 days to 1 hour

Meritco Services Technology Consulting Firm - *Data Scientist Intern*

Shanghai, China | 07/2019–09/2019

- Explored feasible algorithms from papers and blogs related to association rules and formalized Restricted Boltzmann Machine, Hidden Markov Model and PrefixSpan on 60 million pieces of data with Python
- Enhanced online purchase recommendation system by PrefixSpan algorithm and increased conversion rate by 10%

PROJECT EXPERIENCE

Production of Movie Recommendation System

01/2022–05/2022

- Designed and Engineered recommendation system by collecting data from Kafka stream and APIs with 1 million customers and 27k movies, storing data in MongoDB, building Collaborative filtering model and deploying inference service with flask in Python
- Constructed Docker to containerize serving infrastructure for A/B testing of different version of model, set up DVC for provenance and automated model retraining, and implemented Jenkins for continuous integration
- Created metrics to evaluate and monitor data quality, fairness, and system health with Prometheus and Grafana

Speech Recognition System

04/2022–05/2020

- Implemented framework of wav2vec 2.0 algorithm, k-means clustering and GAN for automatic unrecognized speech recognition
- Implemented a combination of RNN and Attention to design end to end recognition system for speech-to-text transcription

Application of Machine Learning in Online Clothes Products Sales Prediction

05/2020–06/2020

- Implemented machine learning models (Random Forest and XGBoost) in Python for online sales prediction for new clothes products

LEADERSHIP EXPERIENCE

Toastmasters International Speech Club, Secretary, Xiamen University

01/2019–01/2020

AIIESEC, International Volunteer, Sri Lanka

07/2017–09/2017