Jiaying Shi

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PROFESSIONAL SUMMARY

7 years of experience in data processing and machine learning (including PhD research), 4 years of industry experience in large-scale data systems and machine learning. Expertise in fraud detection, NLP, and ads. 2 years of tech lead experience.

SKILLS

- Programming (Java, Python, Scala)
- Machine Learning (Deep learning, CNN, NLP, Pytorch, Tensorflow, TFX, Caffe, Theano)
- Optimization (CPLEX, Gurobi, AMPL)
- Workflow and Data Analysis (Airflow, Kubeflow, Hive, Superset, Spark, SQL)

EXPERIENCE

Twitter, San Francisco — *Senior Machine Learning Engineer, Tech Lead*

July 2021 - PRESENT

- Lead a team of 4 engineers across Ads Prediction and ML Infra on building light ads rankers for Twitter Ads products. Job duties include roadmap design, cross team alignment, mentoring junior engineers, and model architecture redesign.
- Designed and implemented the learning period algorithm to solve the cold-start problem for website click products. (x% revenue gain).

Amazon, Palo Alto — *Applied Scientist*

June 2020 - July 2021

- Led the roadmap, design, and prototype of the deep learning spelling correction model.
- Improved spelling correction performance in JP by 25% (xxx million annualized revenue).
- Built and optimized Lucene index to whitelist brand-related overcorrection which reduced operations team workload from xxx ticket per month to xx ticket per month.

Airbnb, San Francisco — *Data Scientist*

July 2018 - June 2020

- Goto person for machine learning problems across multiple teams within the Trust org.
- Built machine learning models to detect fake experiences (>90% fraud reduction) on the platform from scratch.
- Worked cross-functionally with operations and product teams to define and collect labels for model training, optimize the effectiveness of the manual review.
- Extracting structured information from unstructured listing data including description(using Bert) and photos(using CNN) to improve the guest experience.

EDUCATION

University of California, Berkeley, Berkeley, CA

Ph.D. in Operations Research, August 2013 - May 2018

Dissertation: [Flexible Transmission Networks for Renewables Integration](#)

Publication list: [Google Scholar](#)

M.S. in Computer Science, August 2013 - May 2018

Thesis: [Lung Nodule Detection Using Convolutional Neural Networks](#)

Tsinghua University, Beijing China

M.S. in Electrical Engineering, September 2011 - July 2013

B.S. in Electrical Engineering, September 2007 - July 2011

AWARDS

Outstanding GSI Award, UC Berkeley, 2017

IEOR First Year Faculty Fellowship, UC Berkeley, 2014

Samsung Scholarship (2012), LD-Harvest Scholarship (2010), Widjaja Scholarship (2010), Sumitomo Scholarship (2009), Tsinghua University, Beijing, China