

Sihong Liu

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PROFESSIONAL EXPERIENCE

Amazon, Bellevue, WA

Applied Scientist – Artificial General Intelligence Team, Jul 2022 – present

- Tech lead for annotation reduction project in Alexa AI. Driving the effort of Alexa AI monetary conversion & cost reduction
- Tech lead for merging different models in Alexa personalized recommendation
- Worked on the various projects that building next generation of Alexa LLM
- Collaborated with different domain teams for model advertising and long-term partnership.

Microsoft, Redmond, WA

Senior Applied Scientist – Security and Compliance Research Team, June 2019 – Jul 2022

- Tech lead for communication compliance team, responsible for deploying behavior models for Microsoft enterprise users.
- Built Word2Vec, LSTM models using email content to identify phish/spam emails
- Utilized GPT-3 for synthetic data generation, performed various keyword extraction algorithms including Rake, TextRank and keyBert for shipping keyword-based ML models in communication compliance (offensive language, customer complaints, discrimination etc.)
- Finetuned transformer-based models for communication compliance classifiers
- Implement ML interpretation models for both global and local interpretation.

Data Scientist – Office Growth Data Science Team, Feb 2016 – May 2019

- Designed hypothesis, ran experiments, and suggested shipping decisions for various Office product groups
- Developed End-End parametric solution to control false positive rate in scorecard segmentation, which bypass segmentation independence assumption in false discovery rate methods and avoid high computation cost approach like permutation test.
- Performed document recommendation models, trained the models using lightGBM, deep neural network with lambda rank cost function, this project is recognized as best AI features award in MSR 2018
- Built Office 365 renewal model based on various subscription skus, performed customer propensity model to understand the likelihood of user renewal, collaborated with marketing team to launch various marketing campaign for driving renewal rate

IBM, Chicago, IL

Data Scientist – Global Business Service Team, Aug 2013 – Jan 2016

(Performance excellence award in 2015)

- Understand client's business expectation, accessed client's technology capabilities and identified gaps, finally proposing ML solutions and business optimization methods
- Delivered ML models/business insights to improve customer loyalty and business performance by leveraging all data sources including customer level data, digital data and external data in a cost-effective way.
- Analytics solutions include time series forecasting, market basket analysis, customer segmentation analysis, churn propensity model

DEPAUL UNIVERSITY, CHICAGO, IL

Research Assistant, Sep 2011 – Jun 2013

- Participate in the statistical programming of big data, refine database structure and related documentation.
- Write, modify and review SAS/Python program to complete data cleaning/pre-processing and machine learning modeling
- Plan and direct staffing, training, and performance evaluations to develop and control sales and service programs.
- Completing mess data matching, auto download programming, reporting and statistical analysis of GIS and housing data.

EDUCATION

DEPAUL UNIVERSITY, CHICAGO, IL

MS in Data Science

GUANGDONG UNIVERSITY OF FOREIGN STUDIES, CHINA

BS in Statistics, BA in Economy

PATENT

- Intelligent File Recommendation(Microsoft)