

Hongling Lei

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EDUCATION

Carnegie Mellon University

Master of Information Systems Management, Business Intelligence and Data Analytics. GPA 3.93 Pittsburgh, PA
Aug. 2021 – Dec. 2022

- Relevant Courses: Deep Learning, Computer Vision, Distributed Systems, Machine Learning, Unstructured Data Analytics (NLP), Object Oriented Programming in Java, Data Structures

Xiamen University

Bachelor of Economics, Finance. GPA 3.81 Xiamen, China
Sept. 2016 – Jun. 2020

- **University of California, Berkeley**
Semester Exchange, Statistics, Computer Science, Business. GPA 3.95
- **Nanyang Technological University, Singapore**
Summer Exchange, Digital Marketing. GPA 5.0

PROFESSIONAL EXPERIENCE

PPG Industries

AI/ML Intern, AI/ML Center of Excellence Pittsburgh, PA
May 2022 – Aug. 2022

- Constructed time-series forecasting models including ARIMA, Exponential Smoothing, and Prophet to predict finished goods demand for inventory optimization, improving the status-quo forecast accuracy by 17%
- Boosted productivity by developing a Python-based Auto-Forecaster that takes any time series, experiments with over 10 forecasting algorithms, self-tunes hyper-parameters, and recommends the best model
- Derived key drivers of demand fluctuations with explainable AI techniques like SHAP and LIME

Tencent

Data Scientist Intern, Public Data Science Department Shanghai, China
Apr. 2021 – Jul. 2021

- Conducted causal inference with algorithms like Causal Bayesian Networks, X-Learner, and Causal Forest to analyze reasons behind consumer behavior on Tencent's streaming platforms, significantly improving user experience
- Deployed an inference pipeline that automates feature engineering, machine-learning modeling, and future interventions, putting everything into production for practical decision-making with live data

DiDi Global

Data Analyst Intern, Decision Support Department Beijing, China
Sept. 2020 – Nov. 2020

- Supported business and strategy decisions by extracting and analyzing billions of data points on Apache Hive
- Designed a market sizing model with SQL and Excel, correctly predicting driver and order growth rates during holidays and thus alleviating traffic burdens in 14 Chinese metropolitan areas
- Created and monitored business dashboards that can update data and visualize product metrics weekly

Bairong Technology

Data Scientist Intern, Financial Technology Department Shenzhen, China
May 2020 – Aug. 2020

- Built a semi-supervised learning model using the MixMatch algorithm with PyTorch to classify customers into different groups based on credit default risk predictions, achieving 90% accuracy
- Developed an automated report generation program to calculate performance indicators, graph statistical distributions, produce analytical summaries, and create formatted slideshows for clients

PROJECTS

Unsupervised Speech Recognition

Apr. 2022

- Implemented unsupervised audio-to-text transformation with the GAN-based wave2vec_U algorithm, enabling speech recognition for low-resource languages without sufficient training labels

Object Tracking System with Facial Recognition

Mar. 2022

- Constructed a target tracking system for both template matching and motion detection with the Lucas-Kanade method
- Incorporated CNN-based face recognition that achieved 82% accuracy on classification and 0.96 AUC on verification, providing an efficient and precise way to track down criminals with surveillance camera footage

Augmented Reality with Planar Homographies

Feb. 2022

- Conducted real-time image and video AR projections through interest point matching and homography estimation

Grocery Master

Oct. 2021

- Developed a software that allows users to search for a product, shows available options at nearby grocery stores, and compares their nutritional information by live-scraping Target, Walmart, and Trader Joe's websites

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, R, Stata, HTML

Tools: Cloud (Google Colab, Azure, AWS), ML Framework (Pytorch, Scikit-Learn, Sktime, Pandas), Database (Hive, MySQL)