

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, Data Structures for Application Programmers, Object Oriented Programming in Java, Unstructured Data Analytics (NLP), Machine Learning

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, outperforming the status quo forecasts by 17 ppts in accuracy
- Boosted productivity by developing a Python-based Auto-Forecaster that takes any time series, experiments it with over 10 forecasting algorithms, compares forecast accuracies, and recommends the best model
- Derived key drivers of demand fluctuations with explainable AI methods 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 model training, and future interventions based on analytical insights

DiDi Chuxing

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 alleviating traffic burdens in 14 Chinese metropolitan areas
- Created and monitored business dashboards that can update data and visualize analytical results 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

PROJECTS

Unsupervised Speech Recognition (GANs)

Apr. 2022

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

Lucas-Kanade Tracking

Mar. 2022

- Created real-time automated object tracking applications for both template matching and motion detection

Facial Recognition (CNNs)

Feb. 2022

- Built a face recognition system that achieved 82% accuracy on classification and 0.96 AUC on verification

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)