Hongling Lei

Apt 614, 6315 Forbes Ave, PA 15217 | +1 (412) 805-8510 | honglinglei.github.io | www.github.com/HonglingLei | hongling@andrew.cmu.edu

EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Information Systems Management, Business Intelligence and Data Analytics. GPA 3.93 — *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 for Problem Solving

Xiamen University — Xiamen
Bachelor of Economics, Finance. GPA 3.81 — *Sept. 2016 – Jun. 2020*
- Relevant Courses: Mathematical Analysis, Statistics, Probability Theory, Linear Algebra, Econometrics
- **University of California, Berkeley** — Berkeley, CA
  Semester Exchange, Statistics, Computer Science, Business. GPA 3.95 — *Jan. 2019 – May 2019*
- **Nanyang Technological University** — Singapore
  Summer Exchange, Digital Marketing. GPA 5.0 — *Jun. 2018 – Jul. 2018*

PROFESSIONAL EXPERIENCE

PPG Industries — Pittsburgh, PA
AI/ML Intern, AI/ML Center of Excellence — *May 2022 – Aug. 2022*
- Constructed time-series forecasting models like ARIMA, Exponential Smoothing, and Prophet to predict finished goods demand for inventory optimization, outperforming the status quo forecasts by 15 ppts in accuracy
- Boosted productivity by developing Auto-Forecaster that takes any time series, experiments it with over 10 forecasting algorithms, compares forecast accuracies, and recommends the best model

Tencent — Shanghai
Data Scientist Intern, Public Data Science Department — *Apr. 2021 – Jul. 2021*
- Conducted causal inference with algorithms like Causal Bayesian Networks, X-Learner, and Causal Forest to analyze treatment effects of key drivers for customer consumption time on Tencent's streaming platforms
- Implemented experiments on user experience with Tencent WeSee, TikTok, and Kuaishou
- Deployed the causal inference pipeline, including modules like feature engineering, machine-learning model training, and future interventions based on analytical insights

DiDi Chuxing — Beijing
Data Analyst Intern, Decision Support Department — *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 — Shenzhen
Data Scientist Intern, Financial Technology Department — *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*
- Developed real-time automated object tracking applications for both template matching and motion detection

3D Object Reconstruction Based on 2D Images — *Mar. 2022*
- Reconstructed 3D objects from stereoscopic image pairs using triangulation and the eight-point algorithm

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

TECHNICAL SKILLS

Programming/Software: Python (PyTorch, Google Colab, Azure ML), Java, SQL (Hive), R, Stata, HTML
Languages: Mandarin Chinese (native), English (fluent, TOEFL 116 with Speaking 30), Korean (beginner)