

CHENFENG LI

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EDUCATION

- MS Statistics | University of Chicago** (GPA: 3.73/4) Sep 2022 – May 2024
Relevant Courses: Reinforcement Learning, Trustworthy Machine Learning, Deep Learning Systems
Scholarships: Tuition Scholarship of Statistics Master Program (2022, 2023)
- BS Mathematics | Chinese University of Hong Kong (CUHK)** Sep 2018 - Jul 2022
Major Concentration: Computational Big Data Analytics; Minor: Statistics
Scholarships and Honors: BS degree with First Class Honor (2022), Undergraduate Mathematics Scholarship (2021), College Scholarships (2019, 2022)

SKILLS and CERTIFICATIONS

Programming: Python, R, SQL, C, C++, JavaScript, PHP

Technical Skills: Machine Learning (TensorFlow, PyTorch, scikit-learn), LLM, Data Processing (Excel, Pandas), Visualization (Matplotlib, Power BI), Databases, Cloud Computing (AWS, Azure), Statistical Analysis, Algorithms

Language: English (Fluent), Mandarin Chinese (Native), Cantonese (Native)

Certifications: Excel 2019 Associate (Microsoft), Power BI Data Analyst Associate (Microsoft), AWS Certified Cloud Partitioner (AWS), Deep Learning Specialization from DeepLearning.AI (Coursera)

WORKING EXPERIENCE

- Statistical Consultant** | Department of Statistics, UChicago Sep - Dec 2022
- Worked in a team of five consultants. Analyzed requirements from clients about data issue. Communicated with clients to verified details. Provided recommendation in data analysis and delivered consulting report.
 - Suggested logistic regression application and method of grouping the patient data for a study from UChicago Medicine about the impact of a COVID medication on ventilation.
 - Recommended a study from UChicago BSD about the effect of Home-based Community Services (HBCS) on Post-Acute Care (PAC) to use logistic regression without propensity score weighting.
 - Advised a study from UChicago Hospital about significant of chest-to-left ventricle distance on CPR to drop highly correlated covariates. Helped determine the required sample size and linear regression models.

RESEARCH EXPERIENCE

- Independent Researcher** | Master's Thesis, Department of Statistics, UChicago Sep 2023 - May 2024
Examining the Interplay Between Politicians' Facial Expressions in Media Images and News Corporation Bias
- Recognized names of politicians by comparing face images from media and Wikipedia.
 - Analyzed facial expression logits of influential politicians from various media outlets.
 - Implemented classification models and visualized results through dimensionality reduction on the logits.
 - Concluded no significant effect of media orientation on facial expression selection.

- Research Team Member** | Department of Computer Science, UChicago. Oct - Dec 2023
Modified Attention with Non-Linear Kernels and its Impact on Few-Shot Learning
- Collaborated within a three-fellows team. Trained GPT-2 models on nanoGPT with replacing the traditional dot product kernel in attention mechanism by Gaussian, polynomial and periodic kernels.
 - Evaluated the models with MMLU, ARC and Translation tests. Determined that traditional dot product kernels performed best overall, with some non-linear kernels excelling in specific tests.

- Project Leader** | Department of Statistics, UChicago Apr - May 2023
Robustness to Spurious Correlations via Distributionally Robust Optimization (DRO).
- Led a team of three researchers, coordinating tasks and communication.
 - Review and analyzed the theory of DRO.
 - Applied DRO and empirical models on an MNIST dataset with spurious correlations. Made comparison of the performance. Concluded DRO model effectively eliminates the influence of spurious correlations.