Fei Liang

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EDUCATION

Cornell University, College of Engineering *Expected Dec. 2023*

Master of Engineering in Operations Research and Information Engineering, Data Analytics Ithaca, NY

- **GPA: 4.21/4.30**
- Activities: ORIE M.Eng Student Leadership Committee; Teaching Assistant in Probability and Inference

Pennsylvania State University, Schreyer Honors College *Aug. 2018 - May. 2021*

B.S. in Computational Mathematics, Minor in Statistics, Minor in Information Science State College, PA

- **GPA: 4.00/4.00**; Schreyer Honor Scholar; President Sparks Award; Dean's List (Every Semester)
- Activities: Vice President & Founder of Penn State Robo X club, 3rd place in Robomaster Competition

Related Coursework: Big Data Management and Analysis, Data Driven Marketing, Learning with Big Messy Data, Statistical Inference, Marketing Research, Data Structure and Algorithm, Game Theory, Machine Learning

RELATED EXPERIENCE

Data Science Analyst, Johnson & Johnson & Cornell University Capstone Project *Dec. 2022 - present*

- Extract detailed information from user feedback to improve the quality of the prescriptive suggestion system by implementing advanced *Natural Language Processing* techniques in Dataiku using Python
- Apply advanced topic modeling algorithms such as *BERT embedding* to extract insights from sales teams' feedback
- Develop a data analysis dashboard using Tableau to effectively communicate improvement suggestions to stakeholders

Deep-learning Researcher, Beijing Institute of Technology *Jan. 2022 - Jun. 2022*

Capstone Research: National Air Quality Forecasting Platform Design

- Designed and developed a nationwide air quality forecasting Windows application to guide non-experts in making decisions in academic field by providing real-time pollutant density predictions and PM2.5 concentration visualizations
- Built a space-time machine learning model using *Python*, which achieved an over 95% pollutant level prediction accuracy
- Designed and embedded interactive data visualizations dashboard on the forecasting platform using *Python* graphical libraries *Dash, folium and Plotly*, resulting in a 50% increase in user engagement and understanding of the data

Data Scientist Intern, SinoIoV Transportation *Jul. 2021 - Sep. 2021*

- Successfully developed a route suggestion algorithm on an online intelligent transportation platform for over 5,000,000 truck drivers, resulting in a 10% reduction in fuel consumption and a 15% increase in on-time deliveries
- Utilized *PyTorch* framework and *Pandas, Numpy* libraries in *Python* to adapt a *DBSCAN* clustering model and *Natural Language Processing* techniques, achieving more than 90% accuracy in identifying truck drivers' stand locations
- Collaborated with cross-functional teams and stakeholders to understand their data requirements, then built data pipelines on *Hadoop* database and implemented solutions to improve the overall performance of the transportation platform

Machine Learning Engineer Intern, Anzhen Hospital *Sep. 2020 - Jul. 2021*

- Developed a cardiac scar auto-segmentation system resulting in a reduction of more than 10% in doctors' diagnosis time
- Utilized a *U-Net* machine learning model, data model exploration techniques such as *data normalization*, *data augmentation*, and *cross-validation* to improve tissue scars labeling accuracy by 30% using *Python* programming
- Led a team of five individuals to formulate tech solutions and successfully delivered a presentation to hospital specialists

Deep Learning Researcher, Penn State University *Jan. 2020 - May. 2021*

- Researched to find a new training method on *Deep-Ritz* learning algorithm for solving real-world PDEs, resulting in 50% improvement in training efficiency and 15% improvement in model accuracy compared to traditional numerical methods
- Composed an honor thesis and published in university journal, presenting the model structure and results to the Schreyer Honor College academic committee

SKILLS & INTERESTS

Certificates and Awards: IBM Data Science Certificate, Dataiku Core Designer Certificate, MCM Honorable Award

Programming Skills: Proficient in Python, SQL and R, including libraries like Pandas, Scikit-learn, Seaborn, and PyTorch

Developer Tools: Databases such as MySQL and Hadoop HDFS; version control such as Git, Github; Bash scripts

Interests: Playing basketball for 10+ years, skiing for 5+ years; self-learning guitar for two years