SHIYI (DENNIS) HU

+86-15061803561 | sh5701@nyu.edu | Website: https://dennis-who.github.io/

EDUCATION AND HONORS

New York University, Center for Data Science — **New York, NY**
Master of Science, Data Science (Incoming) — Sep 2023

New York University Shanghai — **Shanghai, China**
BS in Data Science, BS in Economics | Cumulative GPA: 3.93/4.00 (Summa Cum Laude) — Sep 2019 – May 2023
- Peng Yachao Global Excellence Scholarship ($17,500 awarded to top 2% of class)
- NYU Shanghai 2022 Recognition Award; Dean's List 2020, 2021, 2022

Relevant Coursework: Machine Learning, Advanced Econometrics, Machine Learning for Language Understanding, Honors Linear Algebra, Probability and Statistics

PROFESSIONAL EXPERIENCE

Craft Associates — **Shanghai, China**
Data Analyst Intern (Web crawling, Python, Excel, NLP sentiment analysis) — Jul 2022 – Present
- Carried out market sentiment analysis for 8 product releases by crawling 100,000+ web posts using python requests
- Developed optimization pipelines for migrating, analyzing, and updating 200+ author profiles with Meltwater data
- Designed 30+ monthly data-curated market insight slides for tech company clients such as Qualcomm and Huawei

Applied Artificial Intelligence Center, Shanghai General Hospital — **Shanghai, China**
Research Analyst Intern (Deep learning, Data ethics, Bioinformatics) — May 2021 – Nov 2021
- Collaborated closely with graduate researchers to build an intelligent diagnosis platform for mild-symptom patients
- Gathered empirical patient data and trained a large neural network for arrhythmia detection with f1 score of 0.813
- Improved accuracy by 2.8% using leaky ReLU; utilized Grad-CAM to improve transparency on CNN-based models
- Presented two 3,000-word reports on the ethical and social impacts of the project to stakeholders in quarter conference

RESEARCH & PROJECT EXPERIENCE

Popularity Bias and Fairness in Recommendation Systems (NYU Shanghai) — **Shanghai, China**
Capstone Project supervised by Prof. Hongyi Wen — Mar 2021 – May 2021
- Developed a nearest-neighbor-based hybrid continuation model for personalized music playlist continuation problems
- Implemented user-specified reranker and BFGS optimization reranker, reducing popularity bias by 40%
- Enhanced user specificity in item-based recommendation systems, resulting in a 13% increase in user rating.

NBA Winning Rate and Season Record Prediction with XGBoost(NYU Shanghai) — **Shanghai, China**
Undergraduate Researcher with Prof. Li Guo — Mar 2021 – May 2021
- Implemented 6 different machine learning models to predict NBA game outcomes based on pre-game team stats
- Developed aggregate functions to automate raw dataset preprocessing and dynamic data extraction on 12,300 games
- Improved prediction accuracy by 5.8% over the brute homecourt advantage prediction with optimized model

Factual Generalization Capabilities of GPT-3 Across Domains (NYU Center for Data Science) — **New York, USA**
Class Project supervised by Prof. Samuel Bowman — Mar 2022 – Jun 2022
- Cross-examined the falsehood patterns of large language models in six domains and explored truth-inducive prompts
- Crowdsourced 2000+ question-answer pairs to generate 200,000+ prompts with effectiveness evaluated on GPT-3
- Performed transfer learning on 36,000 samples to find that GPT-3 produces 43% less falsehoods with 5 more prompts

LEADERSHIP EXPERIENCE

Global Writing and Speaking Fellows, NYU Shanghai Writing and Speaking Learning Assistant — Feb 2021 – Apr 2023
- Curated 30 total hours of academic writing practicums as a weekly series for Global Writing and Speaking Fellows
- 300+ hours of one-on-one tutoring with NYU undergraduates on writing research proposals, literature reviews, etc.

International Youth Neuroscience Association, Head of Events Committee — Feb 2020 – Jun 2021
- Planned reception for the Brain Awareness Week with a capacity for 300+ contestants, judges, audience, and panelists
- Executed outreach to Tongji University for competition events promotion and secured a place in its newsletter

SKILLS

- **Programming skills**: Python (Numpy, Pandas, Flask, Pytorch, Matplotlib), SQL, R, MongoDB, HTML, Bash, CSS
- **Tools and Frameworks:** ETL, Data Visualization, Excel, EDA, Linux, Git version control, Vim