Jinjin Zhao

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EDUCATION

University of Chicago June 2024 (est.)
Computer Science, PhD, Advisor: Sanjay Krishnan
Neubauer Graduate Scholarship ($45000)

Princeton University, *Summa Cum Laude* June 2019
Computer Science, Bachelor of Science in Engineering
Statistics and Machine Learning, Minor

PROJECTS

DeepLens. Introduced a tiered video storage system on temporally and spatially partitioned files. Currently, working on periodic offline allocations of "hot" and "cold" video data, with future extension towards file categorization prediction without any prior access information.

Future Sentiment Predictions of Financial News Headline. Scraped SeekingAlpha's website for a financial news corpus with over 40,000 articles. Introduced a novel concept for analyzing financial news, where sentiment from response comments represents the ground truth of sentiment of article headlines (with the end goal of achieving faster and more accurate reaction times for sentiment-based stock trading). Assessed machine learning prediction capacities with standard models and techniques (eg. RNNs and GloVe).

Boosting the Performance of Small Datasets with Heterogeneous Training. Created a new deep learning architecture to accommodate different image datasets together without preprocessing, improving general classification performance on multiple smaller datasets. Applied onto MNIST, Street View House Numbers, and generated dataset, showing 10% improvement over baseline on Street View House Numbers for 10000 samples.

Voice Conversion through Deep Learning with WaveNet. Combined Google WaveNet and a CNN to create one end-to-end structure between audio files. Changed the identity of the speaker in audio files, without constraining input speaker identity or speech content.

Feature Extraction in Predicting Child Success in Fragile Families. Evaluated the importance of survey results by year in predicting children's GPA, through regression and decision trees, and found that Year 0 and Year 5 are particularly significant. Identified particular features of child success that correlated with previous research. Group presented final report at the official Fragile Family Project paper workshop.

ChatterWorks, 2016 YHacks 1&1 Prize Winner. Created a chatbot with text processing that managed 1&1's client databases in group scenarios.

EXPERIENCE

Research Intern — **Princeton Plasma Physics Lab**
June 2018 - July 2018 — Princeton, NJ

Software Engineering Intern — **Facebook**
June 2017 - August 2017 — Seattle, WA

Facebook University Intern — **Facebook**
June 2016 - August 2016 — Menlo Park, CA

TEACHING EXPERIENCE

Lab Teaching Assistant — **CMSC 16100**
Honors Introduction to Programming, I. Autumn 2019 — University of Chicago

Teaching Assistant — **COS 397/497**
Mobile Computing Design for Assistive Technology. Fall 2018. — Princeton University

Course Grader — **COS324, COS445**
Introduction to Machine Learning. Economics and Computation. Fall 2017. Spring 2019. — Princeton University

Technology Consultant — **Digital Learning Lab**
September 2016 - Jun 2019 — Princeton University

CONFERENCE PRESENTATIONS

Zhao, J., Kolemen, E., Li, X., & Laggner, F. (2018, Nov). *Experimental Based Pedestal Prediction using Machine Learning.* Poster session presented at the 60th Annual Meeting of the American Physical Society Division of Plasma Physics, Portland, Oregon. [pdf]

SELECTED COURSEWORK

Discrete Mathematics (CMSC37115), Computer Networks (COS461), Distributed Systems (COS418), Systems and Machine Learning (COS597G), Advanced Computer Vision (COS529), Advanced Natural Language Processing (COS597E)

SKILLS

Software Languages: Python, Java, C, OCaml, Go, Matlab, R
Technical Skills: Scikit-Learn, TensorFlow, Android, HTML/CSS, MySQL