SAI SHI

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EDUCATION

Temple University *September 2019 - Present*
3rd-year Ph.D. student Current GPA: 3.7/4.0
Computer Science

Arizona state University *2016-2018*
Master of Science Overall GPA: 3.7/4.0
Computer Engineering

University of California, Irvine *2013-2015*
Master of Science Overall GPA: 3.6/4.0
Electrical Engineering

SKILLS

Python: 5 years (TensorFlow, Keras, PyTorch, Django, Hadoop, MapReduce, MongoDB)
Matlab: 5 years (Simulink, Deep Learning Toolbox, Synopsys)
MySQL(2 years), Tableau(2 years), Java(2 years), AWS(2 years), Perl(1 year), Verilog(2 years)

WORK EXPERIENCE

Temple University Philadelphia, USA
Research Assistant *September 2019-Now*

· Conducted experiments and analysis of data science projects under supervision of Prof. Slobodan Vucetic
· Contributed mentoring support to undergraduate in their research projects

Temple University Philadelphia, USA
Teaching Assistant *September 2019-Now*

· Assisted and mentored students in their lab sections of the courses: Introduction to Problem solving and Programming in Python (CIS 1051), Principles of Data Science(CIS 3715), Foundations of Machine Learning (CIS 4526), and Data Structures and Algorithms (CIS 3223)

AsiaInfo Technologies Beijing, China
Machine Learning Engineer *February 2019-September 2019*

· Designed and deployed the intelligent alert and fault warning systems of 5G network
· Detected 80% of system alerts using RCA based on FP-growth algorithm
· Implemented KPI prediction and forecasting models based on time-series analysis

RESEARCH PROJECTS

Transfer Learning for regression modeling Temple University
Collaboration with the University of British Columbia *September 2020-Now*

· Investigated the applicability of transfer learning to improve the accuracy of particle tracking experiments by leveraging historical data
· Applied meta-learning algorithms (MAML, Reptile, etc.) to improve the model under few-shot learning scenarios
· Published paper: https://doi.org/10.1016/j.ces.2021.117190

Ablation study of the subjectivity of Computer Science department ranking Temple University
Ongoing research project *September 2020-Now*

· Performed data cleaning, transformation and aggregation after collecting CS faculty data and DBLP data
· Built our CS scholar ranking model through data analysis (https://chi.temple.edu/csranking_2021/)
· Compared it with other ranking website and conducted ablation study of the subjectivity of ranking

Reinforcement Learning in self-playing video games Temple University
Computer Vision project *August 2019-December 2019*

· Implemented Proximal Policy Optimization algorithm and trained AI to self-play video game MS-Pacman
· Optimized training performance using CNN feature extraction, motion tracking, and epsilon-greedy algorithm

JSON document database design and analysis Temple University
Data Management project *August 2020-December 2020*

· Designed and optimized relational database of json documents using MongoDB and MySQL
· Conducted comparison study between RDBMS and NoSQL

Cloud drive application development using AWS Temple University
Cloud Computing project *January 2020-June 2020*

· Implemented a could-based document storage application using AWS EC2 and S3 storage
· Designed and embedded a file merge tool into the application using MapReduce

Question Answering model comparisons Temple University
Data Mining project *January 2020-June 2020*

· Implemented a question answering system using BERT and achieved 0.80 F-1 score for SQuAD2.0
· Evaluated the effectiveness and limitations of unsupervised learning, supervised learning and BERT based on the results

Sentiment analysis of restaurant reviews Arizona State university
NLP project *January 2018-May 2018*

· Implemented natural language processing model to predict polarity of restaurant reviews
· Improved accuracy by 2% using attention mechanisms, bi-LSTM and ABSA (Aspect-Based Sentiment Analysis)

RELEVANT COURSES

Machine Learning, Natural Language Processing, Convex Optimization, Computer vision, Artificial Intelligence, Cloud Computing, Knowledge Discovery and Data Mining, Deep Learning in Visual Computing, Programming Techniques, Principles of Data Management, Database Design and Programming, Statistical Method, Hardware acceleration and FPGA

LINKS

LinkedIn: http://www.linkedin.com/in/sai-shi
GitHub: https://github.com/sai-shi
Website: https://sai-shi.github.io/