Xuewen Yao

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SUMMARY

Second-year PhD with deep learning and noisy data experience looking for 2020 Summer Internship

EDUCATION

UT AUSTIN
PhD in Data Science
GPA: 3.75 | 2018 - 2023 | Austin, TX

GEORGIA TECH
M.S. in Computer Science
GPA: 3.7 | 2016 - 2018 | Atlanta, GA

CITY UNIVERSITY OF HONG KONG
B.Eng. in Information Engineering
GPA: 3.96 | 2012 - 2016 | Hong Kong

COURSEWORK

Artificial Intelligence
Machine Learning
Deep Learning
Computer Vision
Natural Language Processing
Reinforcement Learning
Convex Optimization
Data Structures and Algorithms
Operating Systems
Database Systems
Digital Signal Processing

SKILLS

- Python (Tensorflow, PyTorch)
- Matlab
- C/C++
- Java
- SQL
- R
- Selenium

TEACHING

CS6601 ARTIFICIAL INTELLIGENCE
Graudate Teaching Assistant with Prof. Thad Starner
Spring & Fall 2017, Spring 2018

MACHINE LEARNING

MULTI-USER ACTIVITY RECOGNITION (MOTION) Aug. 2017 – Nov. 2018

- Fused free-living motion data from wrist-worn and chest-worn sensors
- Built a model for caregiver holding detection using Random Forest
- Paper: Automated Detection of Infant Holding Using Wearable Sensing: Implications for Developmental Science And Intervention (1st author | ACM IMWUT 2019)

SPEAKER VERIFICATION AND IDENTIFICATION Jun. 2015 - Aug. 2015

- Coded MFCCs and GMM for speaker verification in Matlab
- Implemented randomization techniques to preserve privacy
- Paper: Redesign of Gaussian Mixture Model for Efficient and Privacy-preserving Speaker Recognition (2nd author | Cyber SA 2018)

DEEP LEARNING

AUDIO CLASSIFICATION USING CNN-LSTMS Aug. 2019 - Present

- Extracted Spectrograms and LLD from 350 hours' home recordings
- Using CNN-LSTMs to detect infant distress sounds

UNDERSTANDING REGULARIZATION IN DNNS Jan. 2019 - May 2019

- Analyzed the regularization effect of batch, layer, instance, and group normalization as well as dropout using CNNs on CIFAR-10 dataset

PLANET: AMAZON FROM SPACE (KAGGLE) Oct. 2017 - Dec. 2017

- Modified pre-trained ResNet, DenseNet and VGG for satellite images
- Labeled images with atmospheric conditions and various classes of land cover/land use with 90% accuracy using Amazon AWS and PyTorch

ARTISTIC IMAGERY Jan. 2017 - May 2017

- Replicated the work of A Neural Algorithm of Artistic Style
- Used ConvNets to separate and recombine content and style of arbitrary images to produce artistic images using TensorFlow

NATURAL LANGUAGE PROCESSING

CHATBOT FOR POSTPARTUM WOMEN Jan. 2020 - Present

- Scraped 1 year's conversations between Postpartum Support International and caregivers
- Applying topic modelling and Sentiment analysis and building a chatbot

ANALYSIS OF DIURNAL AND SEASONAL MOOD USING TWEETS
Nov. 2017 – Dec. 2017

- Sentiment Analysis for all tweets in 2016
- Analyzed hourly diurnal mood change by day of the week
- Calculated the top PMI words for morning/night

RECOMMENDATION BASED ON SEARCH QUERY (INTERN AT AMAZON)
May 2017 - Jul. 2017

- Identified key words in user's queries and search history
- Developed an innovative model for recommendation
- Expected annual sales in US to grow by 101.7 million dollars

REINFORCEMENT LEARNING

LANE FOLLOWING IN DUCKIETOWN Nov. 2019 – Dec. 2019

- Researched deep reinforcement learning techniques for lane following
- Implemented and compared the performance of DDPG, SAC, and PPO