

Weiwen Xu

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DATA SCIENTIST | QUANTITATIVE ANALYST

Specializing in Artificial Intelligence, Machine Learning, and Deep Learning Models.

Artificial Intelligence graduate student and strategic planner who shrewdly analyzes, manipulates, and builds data and statistics to scope and strengthen projects while ensuring they align with corporate objectives and operational needs. Proficient in data modeling and building machine learning and deep learning models to operate data modeling pipelines by combining artificial intelligence, digital media, emerging technologies and design-thinking methodologies to that promote insight and action-oriented solutions. Experience with image analysis and computer vision using data mining algorithms and regression models in both supervised and unsupervised environments.

CORE PROFICIENCIES

Project Management | Conceptual Ideation | Data Analysis | Quantitative Methods | Business Intelligence
Data Structuring | Data Visualization | Data Technologies | Research Methodologies | Research Data Management
Statistical Computing Methods | Experimental Design, Hypothesis, & Analysis | Leadership | Initiative

TECHNICAL PROFICIENCIES

Programming: Proficient in Python, Java, & SQL/mysql with experience in C/C++ & Objective C

Statistics: Hypothesis testing

Machine Learning Models: PCA, SVM, Linear/Logistic Regression, k-NN, Decision Tree, Random Forest, SVD, Spectral Clustering, k-means, etc

Deep Learning Models: Convolutional Neural Networks, Recurrent Neural Networks (LSTM), GAN, Autoencoder, etc

Deep Learning Framework: Tensorflow, Keras

Numerical Data Analysis: Numpy, Scikit, SciPy, Pandas

Testing: pytest

Computer Vision: OpenCV

Distributed/Cloud Computing: Spark (pySpark), Google Cloud Platform (GCP)

Version Control: Git, Github

BI/Visualization: QlikSense, matplotlib

Other: Microsoft Word, Excel, PowerPoint

EDUCATION, TRAINING, & PROJECT PORTFOLIO

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE | University of Georgia | Expected Graduation: 12/2019

Relevant Courses in Data Science Practicum, Data Science II, Advanced Data Analytics, Advanced Bio-Image Analysis, Business Intelligence.

Dept. of Artificial Intelligence Data Science Projects:

Medical Video Cilia Segmentation (Image Segmentation and Spectral Analysis) | 08/2018 to Present

- Partner with team and managing professor to mine cilia videos from grayscale to produce 3D features using short-time Fourier transform.
- Converted data into actionable insights and presented recommendations to head of program.

Continued...

- Hone skills in critical thinking, case analysis, problem solving, and research methodologies through such processes as redesigning traditional convolutional neural network (CNN) into frequency-based CNN resulting in education about spatial-temporal 3D features for cilia texture segmentation.

Kaggle: [Web Traffic Time Series Forecasting of Wiki Page](#) (Time Series Analysis) | 04/2018 to 05/2018

- Leverage technical tools, such as Keras in Python, to develop long short-term memory (LSTM) model to classify, process, and make actionable predictions on time series data achieving mean SMAPE of 53.8 for 145K time series.
- Champion [detailed differences](#) between Arima and LSTM demonstrating Arima for the short term and LSTM for the long term.

[Scalable Document Classification](#) with pySpark (NLP/Supervised Classification) | 01/2018

- Collaborate with a team of 3 to develop learning model for scalable document classification of 500G text data and through applying feature cleaning and mining with NLTK and Naïve Bayes classifier with pySpark, achieved an accuracy of 94.51%

BACHELOR OF SCIENCE IN ARTIFICIAL INTELLIGENCE | University of Liverpool | Honors/First Class Degree Achieved
Dept. of Computer Science Project:

Real-Time Eye and Pupil Tracking (Imaging Processing, iOS App Development) | 10/2016 to 06/2017

- Conceived, developed, and implemented pupil detection and tracking app in Objective-C on iPad to support stroke diagnosis.
- Partnered with local medical clinic to ascertain key elements necessary for stroke detection to achieve real-time Haar-Cascade detection and analysis of image gradient with OpenCV in C++.

BACHELOR OF SCIENCE IN INFORMATION AND COMPUTER SCIENCE | Xi'an Jiaotong Liverpool University (Suzhou, China)

PROFESSIONAL EXPERIENCE

Data Science Student Assistant, University of Georgia

10/2018 to 08/2019

- Boost efficiency of data format checking and data modeling by pipeline design for raw and unstructured data.
- Improved data load process by implementing incremental load scripts to avoid redundant re-load of old data.
- Enhance static data visualization with interactive data visualization for clients using QlikSense.

Image Processing Intern, Coherent AI

06/2018 to 08/2018

- Led a team of two in designing revised U-net model for hyper-spectral image reconstruction for optical filter design.
- Improved revised model with GAN on hyper-spectral image reconstruction and reduced the error by 50%.