

Yuhong (Jane) Zhu

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EDUCATION

New York University
Master of Science in Data Science
Overall GPA: 3.83/4.00

New York, NY
Sept 2018 - May 2020

University of Wisconsin-Madison
Bachelor of Science in Mathematics
Overall GPA: 3.64/4.00

Madison, WI
Sept 2013 - May 2017

RELEVANT COURSEWORK & TECHNICAL SKILLS

Coursework: Machine Learning, Statistics and Probabilities, Deep Learning, Database, NLP, Computer Vision

Technical Skills: Proficient in Python, SQL, R, Tableau, Microsoft Excel and Latex; Knowledge in Pyspark and Hadoop

PROFESSIONAL EXPERIENCE

DeepMagic

New York, NY

Machine Learning Research Intern (Machine Learning, Deep Learning, AI)

June 2019 – Aug 2019

- **Multi-objects Recognition Model:** Performed data augmentation on limited availability amount of data in **Python** and improved the object recognition model accuracy to 94.2%
- **Object Annotation Model:** Assisted in the implementation of new **neural network algorithm** Polygon-RNN that predicts object contours to automate annotation process
- **Optimization:** Optimized and documented Python scripts that enabled **large data processing**

Wisconsin Medical Society (WMS)

Madison, WI

Risk Analyst Intern (Data Analytics, Data Visualization)

May 2016 – May 2017

- **Tool Redesign:** Accelerated data updating process by one month through redesigning data extraction tool
- **Data Visualization:** Implemented new **graphical analysis** function on the exhibition dashboards delivered to clients
- **Workflow Automation:** Automated weekly reports generating process via Excel VBA
- **Data Analytics:** Built **analytics dashboards** to improve physicians' performance through **SQL** query and **Tableau** dashboard
- **Pricing:** Assessed and evaluated Wisconsin State census data to calculate premium factors for pricing health plans

DATA SCIENCE PROJECTS

Object Detection and Roadmap Recognition in Autonomous Driving (Deep Learning, Computer Vision)

Spring 2020

- Researched state-of-the-art methodologies in detecting objects surrounding an ego car
- Applied computer vision techniques to transform images from frontal-view to bird's-eye-view
- Achieved threat scores of 0.0115 and 0.069 for object detection and roadmap recognition respectively by adopting self-supervised learning techniques and EfficientDet algorithm

Legal Case Summary (Deep Learning)

Fall 2019

- Predicted Supreme Court decisions based on 60-minute oral argument audio files over recent 10 years
- Extracted informative features using Mel-frequency cepstral coefficients and reduced feature size by 10 times
- Trained VGG16 and LSTM with GPU on HPC cluster

Cancer Genetic Mutation Classification (Machine Learning)

Spring 2019

- Preprocessed medical evidence text and extracted features to automate the classification of cancer mutations in Python and **R**
- Applied five **machine learning algorithms** including One-vs-all Logistic Regression, Multi-class SVM, Naive Bayes to choose the best model based on average precision
- Used two oversampling techniques to handle the influence of unbalanced class on model

Restaurant Failure Prediction (Machine Learning)

Fall 2018

- Predicted closure of over 2000 restaurants in the U.S. with **imbalanced dataset** and applied oversampling techniques
- Transformed original data to derive features in a proper format and generated five new features using the existing Yelp dataset and four additional publicly available datasets
- Trained and evaluated **machine learning models** including logistic regression, random forest, gradient boosting classifier on more than 400 features and achieved AUC of 0.68

HONORS, AWARDS AND OTHER EXAMINATIONS

Actuarial Alumni Scholarship; Dean's List (4 semesters)

Bronze at 2020 Eastern Collegiate Taekwondo Conference - Princeton; Champion at 2016 Midwest Collegiate Taekwondo Conference
Passed actuarial exam Probability, Financial Mathematics and Model of Financial Economics