

Ming Tang

Data Scientist / Ph.D.

Summary

- Professional training in Data Science
- Engineering Ph.D. from Carnegie Mellon University
- 5 years of research experience using statistical analysis and model creation

Experience

Metis · Data Scientist

Sep/2017 to Dec/2017

- Metis is an accredited 12-week immersive Data Science boot camp with a focus on python, machine learning, statistics, communication, and design
- Developed 5 projects by applying machine learning and data science knowledge
- Presented results to the peer and documented code in GitHub repository

Carnegie Mellon University · Research Assistant

Aug/2014 to Sep/2017

- Performed statistical analysis (in R and MiniTab) on distribution and extreme size of pores in 3D-printed metal parts
- Developed a 3D geometrical model in Python (Numpy and Matplotlib) and saved 50% production time
- Collaborated actively with researchers in universities, industry and national labs
- Published 5 first-author peer-reviewed journal papers (total citations 50 +)

Data Science Projects

Predicting Top 4 Teams in Soccer League

- Skill sets: Classification Algorithms (Logistic Regression, KNN, Naive-Bayes, SVM, DecisionTree, RandomForest in Scikit-learn), Data management (SQL)
- Applied classification algorithms in Scikit-learn and correctly predicted the top 4 teams with an overall prediction score > 0.8
- Calculated the scores (accuracy, recall, precision, and F1) and confusion matrix to justify and validate the model prediction

Detecting Blurry Images with CNN

- Skill sets: Convolutional Neural Network, Tensor Flow/Keras, Image Processing (OpenCV, Pillow)
- Pre-process 5000 images to a uniform matrix size with OpenCV and Pillow
- Applied Keras/Tensor Flow to train CNN model which correctly predicted 95% blurry images

Recommending Hotels based on Review Contents

- Skill sets: Natural Language Processing, Topic Modeling (LDA), Clustering (K-means, Dimension reduction)
- Applied TextBlob to predict the sentiment based on the review content and compared sentiment scores with given review rates
- Built a recommender which successfully suggested hotels with similar characteristics in the reviews (such as good locations)

Contact

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Education

Carnegie Mellon University
Ph.D. Materials Science & Engineering 2017

Beihang University
BS Materials Science & Engineering 2012

Skills

Language and Tools

Python
Matlab
SQL
HTML/CSS
Javascript
R

Machine learning

Regression
Classification
Clustering
Dimension Reduction
Natural Language Processing
Topic Modeling

Data Visualization

Matplotlib
Seaborn
D3

Database/Management

SQL
MongoDB/NoSQL
AWS
Spark
Hadoop

Software

Excel (macro)
MiniTab
ANSYS
Eureqa (data optimization)