Ming-Ruey(Ray) Chou

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MingRuey
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Self-motivated learner. Devote to technology and programming.

SKILLLS

Programming	Python: Linux - IDE/Virtualenv/Docker & Windows - Anaconda, Java, IDL, Labview
Machine Learning	TensorFlow, Keras, Scikit-Learn, Pandas, Lightgbm, OpenCV .etc with Python
Database	MySQL
Language	Mandarin: Native; English: Fluent

PROJECTS

Kaggle - iMaterialist Challenge(Fashion) at FGVC5

In Top 16% Multi-label image classification competition on over 1 million fashion pictures
- Utilized multi-thread programming to speed up processing
- Transfer learning for standard CNNs with Keras
- Apllied GrabCut and spectral saliency detection to segment background/foreground for preprocessing

Kaggle - Google AI Open Images - Object Detection Track

In Top 19% Object detection competition over 1 million photos with 500+ categories
- Packed data into highly efficient TFRecord format, handling the largest dataset – Open Images Dataset V4
- Employed TensorFlow object detection API to do transfer learning on Faster-RCNN architecture

Kaggle - RSNA Pneumonia Detection Challenge

In Top 21% Detect pneumonia and its position from X-ray images
- Built Unet and Faster-RCNN from scratch with TensorFlow and automated trainning with Estimator API
- Boosted prediction accuracy with data augmentation techniques including half-splitting, rotating, and flipping

Kaggle - Avito Demand Prediction Challenge

In Top 27% Product demand prediction over one million data from Russian shopping website
- Cleaned and prepocessed data with Pandas
- Enhanced GPU-based GBDT model performance with iterative process of EDA and feature engineering

T-Brain AI- Taiwan ETF Price Prediction

Time series prediction competition over 50 ETF indices
- Modeled ETF prices with ARIMA and experiemted random forest classifier with traditional technical indicators

EDUCATION

2016 **M.S. in Physics**, *Department of Physics*, National Taiwan University.
2013 **B.S. in Physics**, *Department of Physics*, National Taiwan University.
Course Work – Coursera :.
- Algorithms 4E, Robert Sedgewick and Kevin Wayne; Princeton
- Machine Learning Foundations, Hsuan-Tien Lin; NTU
- Machine Learning, Andrew Ng; Standford
- Introduction to SQL, Charles Severance; Michigan
- SQL for Data Science, Sadie St. Lawrence; UC Davis

WRITING

M.S. Thesis **Rheometry on Concentrated Suspension of Soft Particles**
(In Mandarin) *www.phys.sinica.edu.tw/jctsai/Ray2016/*

OTHER EXPERIENCE

JAN, 18 ; JUL, 18 **Twin Oaks Education**, *Course Design and Project Mentor*, www.twinoaks-edu.com/.
2017 **Substitute Services in Education**, *Xinyi Elementary School*, Hualien, Taiwan.