

Ming-Ruey(Ray) Chou

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MingRuey
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A self-motivated learner. Devote to technology and programming.

SKILLS

Programming Python: Linux - IDE & Virtualenv/Docker, Windows - Anaconda, Java, IDL, Labview

Machine Learning TensorFlow, Keras, Scikit-Learn, Pandas, Lightgbm

Visualization Matplotlib, Seaborn; OriginLab

Database SQL & MySQL

Language Mandarin: Native; English: Fluent

PROJECTS

Top 16% **Kaggle - iMaterialist Challenge(Fashion) at FGVC5**

Image Classification • Wrote multi-thread to speed up processing over one million images • Transfer learning for standard CNNs with Keras
• Applied GrabCut and spectral saliency detection to segment background/foreground for preprocessing

Top 27% **Kaggle - Avito Demand Prediction Challenge**

Demand Predicting • Data preprocessing with Pandas over one million data • Utilized LightGBM as fully GPU-based GBDT model
• Tackled the task with iterative process of EDA, using observation from EDA to improve the model

Top 19% **Kaggle - Google AI Open Images - Object Detection Track**

Object Detection • Handled the currently largest dataset – Open Images Dataset V4 • Packed data into highly efficient TFRecord format
• Employed TensorFlow object detection API to do transfer learning on Faster-RCNN architecture.

Top 21% **Kaggle - RSNA Pneumonia Detection Challenge**

Pneumonia Detection • Built Unet and Faster-RCNN from scratch with TensorFlow • Automated training with TensorFlow Estimator API
• Applied data augmentation including half-splitting, rotating, and flipping.

T-Brain AI- Taiwan ETF Price Prediction

Time Series Prediction • Modeled ETF prices with ARIMA • Experimented 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; Stanford
- 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.