Ming-Ruey(Ray) Chou

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SKILLLS

Programming	Python: Linux - IDE & Virtualenv/Docker, Windows - Anaconda, Java, IDL, Labview
Machine Learning	TensorFlow, Keras, Scikit-Learn, Pandas, Lightgbm
Visualization	Matplolib, Seaborn; OriginLab
Database	SQL & MySQL
Language	Mandarin: Native; English: Fluent

PROJECTS

Kaggle - iMaterialist Challenge(Fashion) at FGVC5

Top 16%   Multi-label classification competition over one million images. I did transfer learning for standard CNNs with Keras, and use GrabCut and spectral saliency detection to segment background/foreground for preprocessing.

Kaggle - Avito Demand Prediction Challenge

Top 27%   Predict the demand over one million products on Avito.ru website. After standard missing value handling, one-hot encoding, and data normalization, I tackled the task with iterative process of EDA and GBDT modeling with LightGBM. Using both feature importance given by the model and observation from EDA to improve the model.

Kaggle - Google AI Open Images - Object Detection Track

Top 19%   An object detection competition on Open Images Dataset V4. I packed the data into TFRecord format and used TensorFlow object detection API to do transfer learning on Faster-RCNN architecture.

Kaggle - RSNA Pneumonia Detection Challenge

Top 21%   Predict the location of Pneumonia on X-ray images. Using TensorFlow, I built Unet and Faster-RCNN from scratch, trained models with Estimator API and applied data augmentation including half-splitting, rotating, and flipping.

T-Brain AI- Taiwan ETF Price Prediction

Use ARIMA to predict the time series of ETF prices. Also experiemt with traditional technical indicators like RSI, stochastic oscillator, %R, Chaikin oscillator, CCI .etc as features for a random forest classifier.

EDUCATION

SEP, 13 - JUL, 16	**M.S. in Physics**, *Department of Physics*, National Taiwan University.
SEP, 09 - JUL, 16	**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/.
SEP, 16 - AUG, 17	**Substitue Services in Education**, *Xinyi Elementary School*, Hualien, Taiwan.