Lian Chee Loong

DATA SCIENTIST ASSOCIATE

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Techicals

Programming & Markup Language; Python / Rstudio, LaTeX, Markdown, PostgreSQL, HTML5, CSS
Machine Learning & Deep Learning; fast.ai, pytorch, numpy, scikit-learn, pandas, matplotlib, seaborn
Cloud & Deployment; Google Colab, GCP
Version Control / Blog; GitHub, GitHub.io, Atom

Projects

I have started sharing my projects on my blog this year, visit https://cheeloong.github.io/ to learn more about me or my other projects, here's a few!

Vision Applications

Kaggle 2017: Planet Amazon Satellite Classifier with ResNet50 CNN

- Image classification modelling to label satellite image chips (Multi-labeled classification)
- Data Import using Kaggle API, pre-processing involving data augmentation and normalization, transfer learning using ImageNet, fine tuning model; freeze/unfreeze model training
- Attains 93.1% Validation F2 score (Late submission result: top 6% on Kaggle's private leaderboard)

Oxford Pets Dataset Image Restoration with GAN & Perceptual Loss CNN
- Feed low-res images as inputs and generate higher-res images as outputs
- Built pre-trained ResNet34 encoder U-Net, pre-trained Critics, Generative Adversarial Network (GAN), and perceptual loss CNN for super-resolution
- Model performance is evaluated on the picture quality generated by the model, validation accuracy is irrelevant.

Text Application

IMDb Movie Reviews Sentiment Analysis
- **Identifying** viewers' sentiment about a movie (good/bad) using a subset of user reviews and movies IMDb dataset
- **Text pre-processing involving tokenization and numericalization**
- Pre-train source Language Model (ASGD Weight-Dropped LSTM)
- Built target Language Model (IMDb LM) and fine tuning after
- Attains 91.8% Validation Accuracy (Improvable with better GPU)

Tabular Application

Kaggle 2015: Rossmann dataset

- Forecast "Sales" for Germany's second largest drug store chain with given train set
- Importing original data & external datas uploaded by other Kagglers
- Feature Engineering / Data Cleaning: Joining different dataframes, string splitting on dataframes, extracting data fields, dealing with missing values, creating durations between data intervals
- Applying fast.ai preprocessors like `Categorify`, `FillMissing` and `Normalize`
- Applying Dropout Regularization (subclassing from PyTorch) and Batch Normalization
- Attains 12.04% Validation Loss (Late submission result: Top 27% on Kaggle's private leaderboard)

Qualifications

- Experience in predictive analytics, machine learning, sentiment analysis, recommender system, neural networks, deep learning using both traditional machine learning algorithms (e.g. logistic regression, random forest, k-means, support vector machine, etc) and deep learning models (CNN, RNN, GAN, Perceptual Loss, etc)
- Understanding on feature engineering, transformations, selection, and fine-tuning
- SQL based query writing and data manipulation (notably PostgreSQL with PgAdminIII)
- Experience with cloud service provider such as Google Colab and GCP and using its web IDEs
- Built variety of deep learning models on different analytical applications and demonstrated analytical skills, presentation skills, critical thinking and problem solving skills
- Exhibited ability to adapt and learn (e.g. self-learning OOP with Python, applying deep learning models to solve different analytic cases, and building a website portfolio)
- Ability to translate technical aspects of projects into business language for stakeholders.
- Passion for start-up and industries related to user analytics.

Work Exp.

03-06 '18   **Ernst & Young Advisory Services**   Data Scientist Associate

Identified, measured, and designed storyboard of business intelligence's KPI improvement strategies across all business area and built a live and interactive demo dashboard with SAP Lumira Discover 2.0

Organized and readied data warehouse architecture and BI implementation roadmap for submission to EY Brightree

Arranged meetings for Senior Managers and Executive Directors and coordinated resources for use by all attendees

01-04 '17   **Crave Asia Creative Agency**   Digital Analyst
01-12 '16   Identified and developed success metrics and tracking metrics on digital campaign microsite

Worked closely with all creative development departments to create and maintain creative materials for social media adverts and digital campaign microsite

Responsible to write Digital Post-Campaign reports for submission to creative director/client

A/B Testing on adverts on ad viewers of the same demographics/interests to evaluate ad performance to achieve lower cost per audience reach

Education

'12-'15   **Bachelor of Commerce | Dual Majors; Econometrics & Finance**   Monash University Sunway & Clayton
Specialization in Econometrics & Finance (Sunway Campus) for 1.5 years,overall WAM 77.0%.
Specialization in Econometrics & Finance (Clayton Campus) for 2 years, overall WAM 68.5%.

'11   **Australian Matriculation | Pre-University**   Sunway University College
Studied Math 3A/3B, 3C/3D, Economics, ESLR, Accounting & Finance, Business Managem   Enterprise.
Overall ATAR Score: 77.25%

'05-'10   **Sijil Pelajaran Malaysia (SPM)**   SMJK Confucian
6A's,3B's, 1119 GCE-O English: 1A

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