HO CHUNG LEON LAW

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EDUCATION

University of Oxford - St Peter's College, UK 2015-2019

PhD in Statistical Science (OxWaSP Program)

- PhD Thesis title: Model Based Kernel Approaches, in the area of machine learning.
- Supervised by Prof. Dino Sejdinovic and Prof. Christopher Yau.
- Research interest include kernel methods, gaussian process and deep learning.
- Awarded ESPRC and MRC Studentship for DPhil in Statistics and Machine Learning

University of Cambridge - Magdalene College, UK 2014-2015

Part III: Master of Advanced Study, Mathematical Statistics

- Distinction (Top 5%)

- Awarded College Scholarship and Walton Prize for performance.
- Dissertation on Statistical fMRI Neuroimaging (Distinction).
- Related courses include machine learning, modern statistical methods, stochastic networks.

Imperial College London, UK 2011-2014

BSc Mathematics

- 1st Class (Top 5%)

- Awarded G-Research Prize for Academic Excellence.
- Projects in credit risk models and SVM leukaemia prediction models.

INDUSTRY EXPERIENCE

Amber AI, HK (Quantitative Hedge Fund) Dec 2017-Jan 2018

- Quantitative Research Intern

Project: Construct a 1-step, end-to-end stock portfolio Machine Learning Model.

- A neural network with a particular structure in TensorFlow was constructed for stocks data.
- The model can perform long and short strategy, optimising the Sharpe ratio directly.
- The model was tuned and tested on 2016-2018, with Sharpe ratio consistently above 1.5.
- API was setup for model adjustments, different trading strategies, and other loss function.

Printastic, London, UK (Intelligent Photobook App Company) June-Sept 2016

- Data Science Intern (As part of the OxWaSP program)

Project: Prediction of user's intent for purchase over time using App data, to provide targeted interventions.

- The application records customer's actions and information, with the corresponding timestamps.
- Data was cleaned and restructured, and was used to build a time sequential model using LSTM with label being the intent to purchase.
- Model successfully capture intuition and information from the data, and customers were divided into different intent categories over time.
- Results and findings are communicated and API (html) was built for implementation and analysis.

Styloko, London, UK (Tech Fashion Retailer Startup) June 2016

- Data Science Intern

Project: Cluster fashion words with similar meaning, to construct a similarity measure between descriptions.

- Fashion item's text description was extracted and preprocessed using standard NLP techniques, before using Word2vec and K-means clustering to identify words with similar meaning.
- Algorithm was successful in finding categories of occasion, colours, countries, misspellings etc.

PUBLICATIONS

Testing and Learning with Symmetric Noise Invariance (First Author) 2017

Advances in Neural Information Processing Systems (NIPS) 2017, Long Beach, US

https://arxiv.org/abs/1703.07596

- Construct invariant features of distributions, leading to testing and learning algorithms robust to the impairment of the input distributions with symmetric additive noise. These features lend themselves to a straight forward neural network approach, and can also be easily implemented in many algorithms.

Bayesian Approaches to Distribution Regression (First Author) 2018

Artificial Intelligence and Statistics (AISTATS) 2018, Canary Islands

NIPS 2017 workshop (Oral)

https://arxiv.org/abs/1705.04293

- Construct a Bayesian distribution regression formalism that accounts for bag size uncertainty, improving the robustness and performance of existing models. The models propose can be framed in a neural network-style, and we demonstrate its performance on the IMDb-WIKI image dataset for celebrity age classification.

RELATED COURSES/WORKSHOPS

Amazon-OxWaSP Berlin Machine Learning Workshop (1 week) April 2017

- Attend advanced training course on topics in Statistical Machine Learning and Computing for big-data analysis (AWS), designed by senior academics and Amazon researchers.

Samsung Industrial Collaboration with Alan Turing Institute (1 week) May 2017

Academy for PhD Training in Statistics (3 weeks) Feb 2016

Machine Learning Summer School at University Of Kyoto (1 week) Sept 2015

OTHER ACTIVITIES

President of the Hong Kong Oxford Scholars Association (HK Postgraduate Society) 2017-2018

Treasurer and squad member of the Oxford University Table Tennis Society 2016-2017

SKILLS

Programming / Libraries : Python, Tensorflow, R, Matlab, SQL, Torch, C++, Lua (In order of experience)

Languages: English (Native), Cantonese (Native), Mandarin (Intermediate), Japanese (Basic)