MOYAN MEI

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Fashion District, Toronto, Ontario, Canada

EDUCATION

Simon Fraser University *2014.9 - 2016.8*
Master of Science in Statistics Burnaby, Canada

- Graduate Fellowship, GPA: 3.76/4.0

Dalhousie University *2011.5 - 2014.5*
Bachelor of Science in Statistics (Honors) Halifax, Canada

- **Highest** GPA: 3.92/4.0 among (25+) major courses
- First Class Honors, cGPA: 3.82/4.0
- President's Entrance Scholarship, cGPA: 92/100

CORE QUALIFICATIONS

Language & Tool	Python, R, SQL, Spark, Matlab, MongoDB, Bash, LaTeX Google Cloud Service, AWS S2/EC2, Docker
Deep Learning Framework	Pytorch, Keras, Tensorflow, PaddlePaddle, Mxnet, Theano
NLP Library	HFTransformers, Fairseq, AllenNLP, Stanza, Spacy, NLTK, RASA
In-depth Knowledge	Deep Neural Networks, Machine Learning methods, Optimization Error Analysis, Statistical Inference, Probability, Linear Algebra

EXPERIENCE

Course5 AI Lab *2019.11 - Present*
Principal Scientist Toronto, Canada

- Take the helm of a team of NLP scientist to revolutionize the core products of Course5, Optimizer Suite, Discovery, Text Analytics Platform, which are currently serving Lenovo, Pepsico, Colgate & Palmolive and Microsoft etc
- Lead the creation of Persia, a multi-modal, cross-linguistic, task-oriented conversational business analyst bot, built on top of the Rasa framework
- Research on deep learning techniques used in document intelligence, e.g., seq2seq, hierarchical text classification, semantic search, etc, with emphasis on transformer-based multi-task learning, transfer learning, and modelling compression
- Design a toolkit that facilitates one-stop training, deployment, and model inference for natural language processing. Features include but are not limited to: automatic hyper-parameter selection, onnx graph optimization, mixed quantization, knowledge distillation, pruning

WGames Inc *2018.1 - 2019.10*
Machine Learning Scientist Toronto, Canada

- Provided daily game recommendations to half-million users through a multi-task learning approach Multi-Gate Mixture-of-Experts (MMoE)
- Applied collective matrix factorization for cold-start (new users) recommendation, and it increased 30% user retention in the first week
- Improved user experience by conducting a series of text mining tasks, i.e., aspect-based sentiment analysis, topic classification, and smart-reply models with spacy-transformers
- The above makes the company product one of the **top 3 most popular games** in the same category on Google Play

Leafy AI *2017.12 - 2019.7*
NLP Scientist Beijing, China

- Developed a Chinese NLP toolkit based on LSTM and attention mechanism for customer's daily efficiency, such as word segmentation, named entity recognition, event extraction, etc.
- Boosted in-app search experience by training semantically similar sentence embeddings and scalable & memory-efficient FAISS
- Built a closed domain question and answer system (cdQA) for customers to facilitate access internal information
- Implemented knowledge distillation and compression on deep learning NLP models to obtain low-memory and mobile-friendly offline models in Onnx format

Istuary Innovation Group *2016.9 - 2017.10*
Data Scientist Vancouver, Canada

- Designed a 1:1 facial verification, 1:N facial recognition, and face alignment deep learning prototypes embedded in smart camera
- Proposed a two-stage facial verification method, which improves the state-of-the-art model by 6% - 30% on different case scenarios
- Maintained a fast, high-quality, and large-scale image data pre-processing framework, including image cropping, resizing, clustering, and augmentation
- Established an automatic summarization API which produces a condensed representation of its inputs for the Chinese news APP by adapting KL divergence, TextRank, and Recurrent Neural Networks
- Increased customer stickiness to our news APP by recommending semantic similar news with fastText

Center for Operations Excellence, UBC (Co-op) *2015.5 - 2015.9*
Technical Analyst/Statistician Vancouver, Canada

- Applied sentiment analysis with Naïve Bayes, Random Forest, and Hierarchical Clustering, with TF-IDF on over 8 Million Tweets
- Analyzed negative sentiments and provided useful insights (i.e., flight delay, customer service, uncomfortable seats, and poor food supplies) to Boeing company by applying Latent Dirichlet Allocation
- Deployed a tweets processing pipeline including collecting, pre-processing, classifying sentiments and extracting topics embedded in a dashboard

COMPETITION

Statistical Society of Canada Conference Competition *2014.1 - 2014.5*
Uken Company Toronto, Canada

- Applied exploratory analysis with visualization on 300K users to obtain interpretable features about revenue among predictors, e.g., gender, platform, and in-game items, etc.
- Built an ensemble high accuracy $\approx 94\%$ classification model from logistic regression, linear discriminant analysis, and support vector machine for the retention of the game users
- Constructed additive regression models, e.g., generalize additive model and multiple linear regression to predict overall revenues with accuracy $\approx 87.5\%$
- **3rd place** winner of the case study competition

ACHIEVEMENTS

Graduate Fellowship from Simon Fraser University *2016.1*
Third place winner of SSC Conference Competition *2014.5*
Six times Dean's List at Dalhousie University *2011.5 - 2014.5*