**EDUCATION**

**Singapore Management University (SG) 2021 – Present**

* **Ph.D. in Computer Science**

**University of California, Irvine (Irvine, CA) 2016 - 2021**

* **B.S. in Computer Science**

(Completed Courses: Computer Languages, Data Structure, Machine learning, Computer Vision, Algorithm)

* **B.S in Mathematics**

(Completed Course: Calculus, Linear Algebra, Optimization, Differential Equations, Numerical Analysis)

**LANGUAGE**

Cantonese: Native proficiency; Mandarin: Native proficiency; English: Working proficiency

**SKILLS & TALENTS**

Skills: Python, Javascript, Vue, C/C++, SQL, Pandas, Scikit-learn, Pytorch, Matlab, Javascript, NLP, VBA, MongoDB

Experience in VSCode, Eclipse, Jupyter Notebook, Excel, Word, Skype

**RESEARCH**

* **AI Customer Churn Predictor (Teletrac Navman, CA Irvine) Dec 2019 – June 2020**
* Use Pandas to clean and analyze data (csv, xlsx) from company’s different departments. And then extract feature-related data according to departments’ advice
* Use Scikit-learn and fast.ai framework to implement different ML models (i.e. Random Forest, Linear/Logistical Regression, Tabular Deep Neural Network). Fine-tune these models and compare models’ result. According to the model prediction, issue a warning of possible customer loss
* Exploit the trained model’s interpretability to find out high relevant feature related to customer loss and provide business advice to departments depending on these extracted features
* **Shoe Albedo Segmentation April 2019 – July 2020**
* Design and implement a User interactive segmentation tool
* The tool is able to auto load images and restore to previous state before modification
* User can click on loaded image to merge or separate segments in the image
* **Multimodal Dialogue Sep 2020 – Dec 2020**
* Survey on related multimodal dialogue research
* Implementing the baseline model
* **Crowdfunding Investor Visual Analysis Dec 2020 – Sep 2021**
* Design and implement a visual analysis system which enables crowdfunding creators to find appropriate investors

**INTERNSHIP**

* **Business Intelligence (LianYi Technology, China) July 2020 – Oct 2020**
* Communicate with implementation engineers to understand project requirement
* Analyze and extract the provided data; design and build Business intelligence dashboard
* **Text Mining (China Telecom Research, China) Oct 2020 – March 2021**
* Exploit Gradient Descending and Apriori Algorithm to extract a set of correlative hot words from user comments. Define a set of hot words as a hot topic
* Dynamically calculate the weights of hot word to build a hot topic time series model. If the model’s score exceeds the predefined threshold, an alert is issued
* Implement Dynamic Time Warping algorithm to calculate similarity between different timer series and find historical hot topics similar to the current topic
* Implement new domain phrase from users’ comments by mutual information and right, left entropy. Using community discovery and FP-growth algorithm to find hot topics given the extracted phrases

**EXPERIENCE**

**Machine Learning Experience**

* **Neural Machine Translation with Attention**
* Use Pytorch to implement the LSTM based Seq2Seq translation model.
* With the help of attention mechanism, the model translates Spanish into English
* Encoder and decoder are one layer bidirectional and unidirectional LSTM respectively
* The loss function is Cross Entropy Loss and the BLEU score is 22.6
* **Neural Machine Translation of Rare Words with Subword Units**
* Implement a character level encoder which consists of CNN and Highway Network. The encoder produces word embeddings instead of simply looks up word embedding tables
* Implement a LSTM-based character decoder. When word-level Seq2See decoder returns <UNK> token, the character decoder generates a sequence of characters and concatenate the sequence as new word instead of <UNK> .
* The word level Seq2Seq with attention is maintained. The model BLEU score is 26.9

**Volunteer Experience**

* **Place Called Home and Dream Center Volunteer (Los Angeles, CA)** **Dec 2017 – Jan 2018**
* Help children and teenagers aged 8-21 to pursue higher education and become a leader
* As part of a group of 11 students to help distribute Christmas food and gifts in unserved community

**Leadership**

**Anteater AI (Irvine, CA)** **2019 – 2021**

* Introduce the knowledge of artificial intelligence to interested people
* Mentor enthusiasts without a programming background. Explain the ML algorithm and assist them to implement related algorithm.

**Toastmaster (Irvine, CA) 2019 – 2021**

* Broadening public speaking and communication skills
* Organizing and hosting meetings following the Toastmasters guidelines

**Member of Chinese Union in Computer Science (Irvine, CA)**  **2017 – 2021**

* Mentor lower-division students regarding to course assignments
* weekly events to assign find sponsor and new members, then assign task