JIE WANG

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EDUCATION

Bachelor of Science Computer Science

University of Colorado Boulder — *Anticipated Graduation Date: May 2020*

Master of Science Computer Science

University of Colorado Boulder — *Expected: Aug 2020 - May 2022*

Summer Stanford Session

Stanford University — *Jun 2018 - Aug 2018*

Related course work: Data Structure, Computer System, Software Development Tools, Discrete Structure, Algorithm, Introduction to Robotic, Human Center Design, Human Center Computing Professional Development, Principle Programming Language, Natural language processing, Machine learning on Coursera

SKILLS

Programming Language or skills: Python, C++, Dart, Scala, SQL, Quality assurance, Basic JavaScript, Data science, cleanup and validation

Tools: Git, Linux, Remote Server, Pytorch, Flutter, Sublime, Juypter Notebook, Arduino, Photoshop, Microsoft Office

Awards: Wireless charger patent, CU Engineering scholarship 2019

ENGINEERING EXPERIENCE

Research Assistant *NLP lab, CU Boulder* — *Aug 2019 - Present*

- Built a classifier to predict which tweet will be retweeted more by using BERT as language model independently
- Tested the performance of different encoding methods by scientific experiment method
- Achieved 69.4% accuracy with new classifier compared with 66.5% cross validation accuracy in original paper by Chenhao Tan. Preparing to submit paper to an NLP workshop in 2020

ENGINEERING PROJECTS

Sentiment analysis based on BERT *Independent Study With Prof. James Martin* — *Jan 2019 - May 2019*

- Project Module: BERT, Language modeling, Juypter Notebook, unit test
- Responsibility: Reproduced by LSTM using Tensorflow and tested on Juypter Notebook. Did unit-testing and regression-test. Replicated sentiment analysis using BERT.
- Result: Due to the small amount of data (around 300 dataset), over-fitting was caused, and the final accuracy was not ideal.

Predicting retweets based on BERT *Independent Study With Prof. Chenhao Tan* — *Jun 2019 - Present*

- Project Module: BERT, Language modeling, Pytorch-transformer, hyper-parameters
- Responsibility: Analyzed Pytorch-transformer code from Huggingface, wrote a data processor to pass 10k data into the language model, and trained a binary classifier based on BERT. Understood and analyzed the theory of BERT's tokenization and encoding. In this process, also conducted experiments to analyze relationship between batch size, learning rate.
- Result: Achieved 69.4% accuracy. Improved 3% comparing with the logical regression model.

Suicide prediction based on BERT *Audited in data mining course work.* — *Sep 2019 - Dec 2019*

- Project Module: BERT, Language modeling, dataset from *weibo*
- Responsibility: Collaborated with data mining group and built a classifier based on BERT. Analyzed the reason of high accuracy of the final result.
- Result: Due to the special dataset we collected, implemented 97.8% dev accuracy based on data from *weibo*

Game building on hardware *Aug 2018 - Oct 2018*

- Project Module: transistor, PCB Board, Arduino
- Responsibility: Soldered transistors, LED and switch button on PCB board to build a programmable platform. Programmed on Arduino in C to control the display and built T-Rex game on hardware.
- Result: Finished design a hardware T-Rex Game. Demo Link: https://youtu.be/NNZjJhLV18A

LEADERSHIP EXPERIENCE

Co-Founder *Wecuner (Trade Tech Company), Stanford University* *Jun 2018 - Present*

- Founder a trading platform for Chinese student to buy and sell second-hand items
- Wrote the front-end by using Wxml, Wxss and some JS
- Provided service to University of Colorado Boulder and CSU. The number of users has achieved 3400 until Nov 2019

Math tutor and learning assistant *Department of Mathematics, CU Boulder* *Aug 2018 - Present*

- Assisted college student to solve calculus, linear Algebra homework at the Math Academic Research Center
- Taught in pre-calculus course, enhanced communication skill and teaching ability