Jongyeol Yang

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Work Experience

Feb 2019 - present, Research Engineer, Shinhan Bank

NLP Part Leader, AI Center

- Development of cleanbot to detect hateful and abuse comments
- PLM(BERT, Electra, XLNET) development specialized in financial domain
    - Build full PLM process including crawling data, preprocessing, building tokenizer, pre-training PLM, fine-tuning 7 korean language tasks(GLUE)

Sep 2018 - Feb 2019, Researcher, Schperics

Research advanced AI in Finance

- Develop and Operating for Quant system
    - Design and build process to enable data collection and utilization in real time (mysql, hdf)
    - PIPELINE design and development to enable easy service of backtest strategy
- Deep Learning Trend Prediction Model Development
    - Build 1 TB of training data by imaging orderbook and trade data
    - Fine-tuning based on SOTA image classification model
    - Predict the price after 30 to 60 seconds with a 60% probability

Aug 2017 - Sep 2018, Senior Researcher, KETI

Research Engineer, AI center

- Training model and build Text-to-speech system
    - Training model and build embedded text-to-speech system
    - Develop Tacotron based Deeplearning text-to-speech system
- Development of a system for judging the consistency of contents from the title and body of a news article
    - Develop text tokenizer and word2vec by learning with 10M text data
    - Content consistency determination using TF / IDF logic from 100,000 news data

Juny 2016 - present, Research Engineer, NCSOFT

Research Engineer, AI lab

- Research and developed AI bot which can fight against to expert human player at Blade&Soul(fighting game developed by NCSOFT).
- Improved winning rate of AI 35%(30-%>75%) against expert human player.
- Reinfocement Learning algorithm is used to develop AI bot.
- Build data-parallel distributed reinforcement learning system using Tensorflow framework(2 GPUs x 3 Servers).

June 2012 - June 2016, Research Engineer, LG Electronics

Research Engineer, Deep Learning

- Implemented action recognition using features extracted from video. Applied with CNN, LSTM algorithm and implemented using torch.

Research Engineer, Speech

- Improved Keyword Spotting by 15%(80%->95%) in W2 smart watch by re-designig training data and adding verification modules.
- Trained DNN model using Kaldi and implemented verifying engine to classify Keyword and acoustic sound from surrounding sound.
- Improved text-to-speech quality which is dropping at high speech(MOS 2.9 -> 3.2) by referencing HTS open source.
- Developed text-based sentiment classification using Naive Baye's algorithm. Embedded in LG Qvoice that is used in most of the LG smart phones.
- Developed emotional text-to-speech. Embedded in LG Qvoice that is used in most of the LG smart phones.
- Selected as a coding expert in LG Electronics group of 50 people.

Feb. 2010 - May 2012, Samsung Electronics

Research Engineer, Speech

- Developed Korean, English, Japanese, Italian text-to-speech. Embedded in Svoice and talkback that is used in most of the Samsung smart phone.

Skills

Programming Languages

- proficient: Python
  - Wrote Deep Learning scripts by using python(tensorflow, torch).
  - Wrote many program which is converting data, normalizing text, analyzing speech data using python module such as regular expression, numpy, and pandas.
- intermediate: Java, C, C++
  - Implemented text-to-speech engine using C which is normalize text and generate audio signal.
  - Read and modify text-to-speech android app source written in Java.

Experienced deeplearning library

- Tensorflow, torch, huggingface
  - Implement algorithms introduced in the paper using pytorch/tensorflow
  - Analysis and modifying NLP huggingface library

Education

- M.S., Information and Technology, Gwangju Institute Science and Technology, 2010. GPA 4.1.
- B.S., Electronnics Engineering, Inha University, 2008. GPA 3.9.

Awards

- Won 1st place in a on-site coding competition (2015, LG Electronics), and selected as a coding expert in LG.

- Won 1st place in a online coding competition (2016, LG Electronics).