

Jongyeol Yang

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Work Experience

Feb 2019 - present, Research Engineer, Shinhan Bank

NLP Part Leader, AI Center

- 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)
- Training for new AI transfer workers (cs231n, cs224n)
 - <https://github.com/SH-NLP/research>
- Development of automatic answer recommendation system through similar app reviews
- Development AI HR System
 - Development of key keyword extraction system after clustering personnel data based on personnel evaluation data

Sep 2018 - Feb 2019, Researcher, Schperics

Research advanced AI in Finance

- Build Machine Learning Trading System (Advances in Financial Machine Learning: Marcos Lopez)
 - https://github.com/didw/ml_finance
- Build High-Frequency Deep Learning Model
 - Predict price using orderbook
- Build Trend-following Trading System
 - CAGR: 300%, SR: 2.1, MDD: 40%

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.
- Reinforcement 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.

Personal Projects

- Stock data analysis and optimal portfolio design using AI (<https://github.com/didw/PyTrader>, https://github.com/didw/ml_finance)

Skills

Programming Languages

- proficient: Python
 - Wrote Deep Learning scripts by using python(tensorflow).
 - 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.
 - Analyze and modify Kaldi open source and add new modules written in C++.
 - Read and modify text-to-speech android app source written in Java.

Experienced deep-learning open source library

- Tensorflow, pytorch

Domain knowledge

- Machine Learning, Deep Learning(TTS, Vision, NLP), Reinforcement Learning, Time-series Signal Processing

Education

- M.S., Information and Technology, Gwangju Institute Science and Technology, 2010. GPA 4.1.
- B.S., Electronics 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).