Jongyeol Yang

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Work Experience

Sep 2018 - present, Researcher, Schperics

Research Scientist

- Develop and operate trend following trading system
  - CAGR: 300%
  - Sharp Ratio: 2.5
- Develop trading system using Deeplearning(CNN)
  - Orderbook, trade data preprocessing
  - Training AI model using CNN
- Data collection
  - Data collection and store to sql db (Stock, Future, News)

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.

- Implemented unbalance detecting system for washing machine using temporal features from sensor signal(reduced 40s dehydrate time). Experiments were conducted through various DNN algorithm(ANN, CNN, LSTM) and implemented using torch framework.

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.
- Shortened speech database labeling process from 1 month to 1 week by making bash script and removing duplicate module.
- 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.

Research Engineer, MANUFACTURING TECHNOLOGY CENTER

- Improved manufacturing speed of HDD manufacturing automation system and implemented new module which is checing sound in automation QA system of smart phone.

Personal Projects

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

Skills

Programming Languages

- proficient: C, C++, Python
  - 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++.
  - 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: Bash, Lua, Java, Perl

- Read and modify text-to-speech android app source written in Java.
- Wrote batch scripts using bash, and perl script.
- Wrote Deep Learning scripts by using lua(torch).

Experienced open source library

- Tenworflor, torch, Kaldi, HTS, hts_engine API

Domain knowledge

- Machine Learning, Deep Learning(CNN, RNN, LSTM), Reinforcement Learning, Speech Signal Processing

Experienced VCS

- Subversion, Git

Experienced Platforms

- Linux, Android, Windows

Languages

- Intermediate in English (TOEIC: 820)

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).