Jongyeol Yang

e-mail: yangjy0113@gmail.com
github: https://didw.github.io
linkedin: https://kr.linkedin.com/in/jyyang0113

Summary

- **Various Experiences in Machine Learning Area**
- **Deep Learning Experiences with Torch, Tensorflow Framework**
- **Excellent Problem Solving and Programming Skills**

Work Experience

Aug. 2017 - Present, Senior Researcher, KETI

Senior Research, AI Center

- Build TTS system using HTS, tacotron.
- Build FakeNews detecting system using TF/IDF and RNN.

June 2016 - Aug. 2017, Research Engineer, NCSoft

Research Engineer, AI lab

- Build Reinforcement Learning system to train AI Player which can play against Human Player in Blade&Soul(Released in NCSoft)
- Improve winning rate around 100% against top 10% player. (30-%>75%)
- Used various algorithm. Supervised Learning, DQN(Deep Q-Network Learning), Adaptive Exploration.
- 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) using torch framework.

Software 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 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

Software 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.

Software 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.

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 many program which is converting data, normalizing text, analyzing speech data using python module such as regular expression, numpy, and pandas.
  - Wrote Deep Learning scripts by using python(Tensorflow, PyTorch).
- intermediate: Java, bash, Perl
  - Read and modify text-to-speech android app source written in Java.
  - Wrote batch scripts using bash, and perl script.

Experienced open source library

- Tenworflor, pytorch

Domain knowledge

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

VCS

- Subversion, Git

Platforms

- Linux, Android, Win32

Languages

- Fluent in Korean
- 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.

Selected Oral Presentations

- C.J. Chun, Y.G. Kim, J.Y. Yang, H.K. Kim, "Upmixing Stereo Audio into 5.1 Channel Audio for Improving Audio Realism," 2009 Signal Processing, Detection & Estimation, IT Convergence Workshop, pp. 96-99, July 2009
- Y.G. Kim, J.Y. Yang, Y.H. Lee, H.K. Kim, "Implementation of audio panning system based on user detection for multi-view broadcasting services," HCI 2009, Feb, 2009
- J.Y. Yang, H.K. Kim, "Comparison of emotional classifiers using MFCC features," ElectronicsEngineers of Korea, Nov, 2008

Awards

- Won 1st place in a coding competition (2015, on-site final, LG Electronics), and selected as a coding expert in LG.
- Won 1st place in a coding competition (2016, online round 1, LG Electronics).

Teaching

- Machine Learning lecture in FastCampus.

Personal Projects

- Building Stock Trading System.

Personal Interests

- Participating Kaggle Competition
  - https://www.kaggle.com/jyyang
- Participating Algorithm Competition
  - https://www.topcoder.com/members/didw/
- Game AI Programming
  - https://www.codingame.com/profile/d82d17465ae2566f4284d813be024aaf7539731