Hyundong Justin Cho

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EDUCATION

University of Southern California (USC) **Starting program from 2020.9**
PhD in Computer Science Los Angeles, CA, USA
Viterbi School of Engineering

Hong Kong Unversity of Science and Technology (HKUST) **2013.9 - 2019.6**
BEng in Computer Science, Graduated with First Class Honors [GPA: 3.87] Hong Kong, HK
Department of Computer Science, School of Engineering

USC **2018.8 - 2018.12**
Undergraduate Exchange Program for Fall 2018 [GPA: 4.0] Los Angeles, CA, USA
Viterbi School of Engineering

RESEARCH/WORK EXPERIENCE

Stitch Fix **2020.6 - Present**
Merch Product Development Data Science Intern San Fransisco, CA, USA

- **Comments Summarization:** Surfaced representative client comments to facilitate purchasing decisions for merchandising partners by clustering comments embedded with a fine-tuned SentenceBERT model and using UMAP and HDBSCAN.
- **Entity recognition:** Identified comments mentioning comparative pricing information by post-processing clustered comments and automatically extracted competitors and relative price differences with a custom named entity recognition model

USC Information Sciences Institute (ISI) Natural Language Group (NLG) **2019.9 - 2020.6**
Programmer Analyst, PI: Professor Jonathan May Los Angeles, CA, USA

- **Active Social Engineering Defense (ASED) program:** Combined a finite state transducer and a fine-tuned GPT-2-based neural conversational model for the dialogue state manager of an automatic phishing email reply system. The project is sponsored by the Defense Advanced Research Projects Agency (DARPA).

USC ISI NLG **2019.6 - 2019.9**
Summer Research Intern, PI: Professor Jonathan May Los Angeles, CA, USA

- **Structure-to-text:** Trained decoder-only Transformers for generating text from structured data, experimenting with play-by-play records of Major League Baseball matches on retrosheet.org to automatically create recap articles.

USC ISI NLG **2018.9 - 2019.2**
Undergraduate Research Assistant, PI: Professor Jonathan May Los Angeles, CA, USA

- **Front-end:** Developed a data collection interface for Amazon Mechanical Turk tasks to identify "Yes, and" dialogue pairs from audio segments and edit the given transcript to generate desired pairs.
- ***SPOLIN* Corpus:** Constructed the *Spontaneanation Pairs of Learnable ImprovisatioN corpus*, a collection of "Yes, and" type dialogue acts for engaging dialogue generation from improv podcasts. Augmented the corpus with filtered out data from the Cornell Movie Corpus using a fine-tuned BERT classifier. More detail at justin-cho.com/spolin.

Imago.ai **2018.6 - 2018.9**
Artificial Intelligence Researcher Hong Kong, HK

- **Question Answering:** Trained a BiDAF question answering model augmented with self-attention mechanism with MS-MARCO and SQuAD V2 datasets and evaluated performance with BLEU and ROUGE metrics.
- **Production deployment:** Deployed the trained model with a Flask app on the company's production server (demo: http://bidaf.imago.ai/)

PUBLICATIONS

Hyundong Cho, Jonathan May. 2020. Grounding Conversations with Improvised Dialogues. *2020 Annual Conference of the Association for Computational Linguistics (ACL)*

RELEVANT COURSE PROJECTS

Sentiment Analysis with Yelp Reviews Dataset **2019.2 - 2019.6**

- Big data mining NLP project, Instructor: Yangqiu Song
- Developed an efficient data preprocessing pipeline and pretrained word embedding models for sentiment analysis with TorchText and PyTorch.
- Experimented with various neural network architectures such as RCNN, GRU and self-attention with state-of-the-art learning algorithms such as cyclic learning rate, and slanted triangular learning rate.
  Project Link: https://github.com/tea1528/Yelp-Sentiment-Analysis

Inflo: News Data Processing for Fake News Detection **2018.9 - 2019.4**

- Final Year Project (year-long senior level team project), Supervisor: Kenneth Wai-Ting Leung
- Developed a novel platform for a versatile fake news detection service with a multi-modal fake news detection neural network using PyTorch, Flask, and JavaScript.
- Finalist for Best Final Year Project. Project Link: https://youtu.be/nNoGV8xvscQ.

Goal-oriented Dialogue Generation **2018.2 - 2018.6**

- NLP course final project, Instructor: Pascale Fung
- Applied the Transformer model from the *Attention is All You Need paper* for goal-oriented dialogue generation of the Dialogue State Tracking Challenge (DSTC) 6 series. Project Link: https://github.com/wise-east/End-to-End

Artificial Intelligence Consulting for Barons & Company **2017.9 - 2017.12**

- Consulting project for a client in the executives recruitment industry, Instructor: Professor Betty Lin
- Won the Best Consulting Team Award for providing an operational solution that incorporates machine learning to automatically recommend executive-level resumes based on job descriptions.
- Project Link: https://www.facebook.com/techmgmt/videos/1744861808893464/?fref=ts

AWARDS

Viterbi School of Engineering/Graduate School Fellowship for Incoming Students **2020**
Academic Excellence Recruitment Scholarship, Full Tuition **2013.9 - 2019.6**
Reaching Out Award, HKSAR Government Scholarship Fund **2019.2**
Champion of CodeIT Suisse Coding Challenge, Credit Suisse APAC Region **2017.9**
Dean's List, School of Engineering, HKUST **2013.12, 2015.6, 2017.12, 2018.6, 2019.6**

SKILLS/LANGUAGE

Computer languages: Python, C++, Java, Javascript, SQL, PHP
Frameworks/Platforms: PyTorch, Keras, AWS, Mechanical Turk, jQuery, NLTK, spaCy, Flask, MongoDB, nginx
Languages: English (native), Korean (native)