

Hyundong Justin Cho

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EDUCATION

University of Southern California (USC)

PhD in Computer Science
Viterbi School of Engineering

2020.9 - Present
Los Angeles, CA, USA

Hong Kong University of Science and Technology (HKUST)

BEng in Computer Science, Graduated with First Class Honors [GPA: 3.87]
Department of Computer Science, School of Engineering

2013.9 - 2019.6
Hong Kong, HK

USC

Undergraduate Exchange Program for Fall 2018 [GPA: 4.0]
Viterbi School of Engineering

2018.8 - 2018.12
Los Angeles, CA, USA

RESEARCH/WORK EXPERIENCE

Stitch Fix

Merch Product Development Data Science Intern

2020.6 - 2020.9
San Francisco, CA, USA

- **Comments Summarization:** Surfaced representative client comments to facilitate purchasing decisions for merchandising partners with a pipeline comprised of a SentenceBERT model, 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)

Programmer Analyst, PI: Professor Jonathan May

2019.9 - 2020.6
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

Summer Research Intern, PI: Professor Jonathan May

2019.6 - 2019.9
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

Undergraduate Research Assistant, PI: Professor Jonathan May

2018.9 - 2019.2
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 *Spontaneation 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

Artificial Intelligence Researcher

2018.6 - 2018.9
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>

Info: 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)