Seokchan Ahn

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Education

University of California, Irvine — *Present*
M.S. in Computer Science — *Irvine, CA*

Seoul National University — *Aug 2018*
B.S. in Computer Science and Engineering, B.B.A. (Dual Degree) — *Seoul, Korea*

Work Experiences

Samsung Research — *Jul 2018 - Jul 2021*
Research Engineer @ Neural Machine Translation, NLP Lab — *Seoul, Korea*

- Improved translation quality and latency of simultaneous translation models by monotonically paraphrasing corpus.
- Established strong baseline of Korean→English End-to-End Speech-to-Text translation comparable to cascaded version by leveraging weakly-supervised data.
- Improved performance of Korean→English cascaded Speech-to-Text translator using domain adaptation techniques.
- Compressed text translation models for mobile translator app using mixed precision quantization.
- Developed tools for data management, filtering, and augmentation to accelerate research.

Korean National Police Agency — *Jan 2014 - Oct 2015*
Software Developer (Alternative Military Service) — *Seoul, Korea*

- Led development and maintenance of ERP system for supplies, consumables, and budget management as web service that became a de facto standard in every police station in South Korea.
- Developed statute book Android application using government API.
- *Skills : LAMP (Linux, Apache HTTP, MySQL, PHP) stack, Android*

Research Experiences

Biointelligence Lab, Seoul National University — *Mar - Jun, 2019*
Independent Research (Advisor : Prof. Byoung-Tak Zhang) — *Seoul, Korea*

- Designed and implemented a Skim-RNN model with multiple skimming levels.
- Achieved similar accuracy on QA tasks while reducing computations up to 10.27x less than Skim-RNN with two levels.

Architecture and Code Optimization Lab, Seoul National University — *Jan - Mar, 2018*
Research Intern (Advisor : Prof. Jae W. Lee) — *Seoul, Korea*

- Implemented tiled convolution kernel with OpenCL for FPGAs.
- Investigated optimizable factors in data movement and kernel computation.

Google Summer of Code 2017 — *Jun - Aug, 2017*
Participant with Apache (Mentor : Prof. Byung-Gon Chun) — *Seoul, Korea*

- Designed node labeling API for Apache REEF that enables clusters to allocate jobs into the most suitable worker node.
- Tested API on distributed system using Apache Hadoop Yarn.

Publications

HyoJung Han*, **Seokchan Ahn***, Yoonjung Choi, Insoo Chung, Sangha Kim, Kyunghyun Cho. "Monotonic Simultaneous Translation with Chunk-wise Reordering and Refinement." In *Proceedings of the Sixth Conference on Machine Translation (WMT)*, 2021. [pdf]

Sathish Indurthi, Mohd Abbas Zaidi, Nikhil Kumar Lakumarapu, Beomseok Lee, Hyojung Han, **Seokchan Ahn**, Sangha Kim, Chanwoo Kim, Inchul Hwang. "Task Aware Multi-Task Learning for Speech to Text Tasks." In *IEEE ICASSP*, 2021. [pdf]

Seokchan Ahn, Kyungtae Kim, and Byoung-Tak Zhang. "Improving Natural Language Reading Performance with Extended Skim-RNNs." In *Korea Computer Congress*, 2018. [pdf]

Technical Skills

Programming Languages	Python, Shell script, Perl, C, C++, Java, Javascript, SQL, PHP
DL Frameworks	Tensorflow, PyTorch
Operating Systems	Linux, Android
Cluster Software	Docker, Kubernetes, Spark, Hadoop, LSF