

Seokchan Ahn

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INTERESTS	Natural Language Processing, Internet of Things, Model Compression		
EDUCATION	Seoul National University <i>B.S. in Computer Science and Engineering, B.B.A. (Dual Degree)</i>		<i>Aug 2018</i> <i>Seoul, Korea</i>
WORK EXPERIENCES	Samsung Research <i>Research Engineer, Machine Translation</i>		<i>Jul 2018 - present</i> <i>Seoul, Korea</i>
	<ul style="list-style-type: none">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.Improved performance and robustness of Korean↔English text translation models by data augmentation, data filtering.Compressed text translation models for mobile translator app using techniques such as matrix factorization, pruning, and quantization.Developed tools for corpus management, filtering and augmentation to accelerate research.		
	Korean National Police Agency <i>Software Developer (Alternative Military Service)</i>		<i>Jan 2014 - Oct 2015</i> <i>Seoul, Korea</i>
	<ul style="list-style-type: none">Developed ERP system for supplies, consumables, and budget management as web service using LAMP (Linux, Apache HTTP, MySQL, PHP) stack that became a de facto standard in every police station in South Korea.Developed statute book Android application using government API.		
RESEARCH EXPERIENCES	Biointelligence Lab , Seoul National University <i>Independent Research (Advisor : Prof. Byoung-Tak Zhang)</i>		<i>Mar - Jun, 2019</i> <i>Seoul, Korea</i>
	<ul style="list-style-type: none">Designed and implemented a Skim-RNN model with three or more 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 <i>Research Intern (Advisor : Prof. Jae W. Lee)</i>		<i>Jan - Mar, 2018</i> <i>Seoul, Korea</i>
	<ul style="list-style-type: none">Implemented tiled convolution kernel with OpenCL for FPGAs.Investigated optimizable factors in data movement and kernel computation.		
PUBLICATIONS	Seokchan Ahn , Kyungtae Kim, and Byoung-Tak Zhang. "Improving Natural Language Reading Performance with Extended Skim-RNNs." In <i>Korea Computer Congress</i> , 2018. [pdf]		
WORKS IN PROGRESS	"Language-Modulation based Multilingual Speech Recognition." In <i>IEEE ICASSP</i> , 2021. (Submitted)		
HONORS AND AWARDS	Finalist Samsung Electronics IoT Innovation Challenge, developed indoor positioning system <i>2016</i> 2nd Place Samsung Electronics Home Appliance Idea Competition <i>2016</i> 1st Place LG CNS IoT Hackathon, developed data transferring app using camera <i>2015</i> 2nd Place LG CNS IoT Hackathon, developed IoT-powered gym system <i>2014</i>		
TECHNICAL SKILLS	Programming Languages	Python, Shell script, Perl, C, C++, Java, Javascript, SQL, PHP	
	DL Frameworks	Tensorflow, Tensor2Tensor, PyTorch, Marian	
	Operating Systems	Linux, Android	
	Cluster Software	Docker, Kubernetes, Spark, Hadoop, LSF	

PROJECTS

File Transfer via Camera, LG CNS
*IoT Hackathon Participant*Aug 2015
Seoul, Korea

- Implemented Android app that can send files through display or printout.
- *Skills : Java, Android*

Indoor Positioning System for Shopping Cart, Samsung Electronics
*IoT Innovation Challenge Participant*Sep - Dec, 2016
Seoul, Korea

- Implemented indoor positioning system on shopping cart using Samsung ARTIK IoT platform.
- Enhanced Bluetooth Low Energy (BLE) beacon based localization with particle filter.
- Calibrated location with pedestrian dead reckoning (PDR) and IR sensors on the wheels.
- *Skills : Linux, IoT*

VOD Demand Forecasting, Castis (VOD Company)
*Creative Integrated Design 2, Seoul National University*Mar - Jun 2017
Seoul, Korea

- Designed and implemented demand forecasting model using LSTM for region caching.
- Achieved accuracy of 94.4%, improved by 11.3% than previous heuristic based method.
- *Skills : PyTorch, Spark*

Google Summer of Code 2017
*Participant with Apache*Jun - Aug, 2017
Seoul, Korea

- Designed node labeling API for Apache REEF that enable clusters to allocate jobs into the most suitable worker node.
- Tested API on distributed system using Apache Hadoop Yarn.
- *Skills : Java, Hadoop*

Hey!
*Creative Fusion Project, Seoul National University*Sep - Dec, 2018
Seoul, Korea

- As project in human-computer interaction class, designed system that helps students to be connected with their classmates and implemented as Android messenger app.
- Submitted to CHI2018 Student Design Competition, of which theme was 'engage'.
- *Skills : Interaction Design, Android*

TEACHING

Undergraduate Mentoring Program, Seoul National University
*Mentor*Mar - Dec, 2017
Seoul, Korea

- Helped undergraduate students with basic C++, Java programming and answered questions regarding CS courses in person.

EXTRACURRICULAR
ACTIVITIES**ETI (Entry into Technology & Industry)**
*Editor*Jun - Aug, 2019
Seoul, Korea

- Organized and participated in running blog and facebook page that provide tech news, reviews, and analysis on tech companies.
- Interviewed Korean tech startups and wrote articles for them.
- Website : <https://etinow.me>, Facebook : <https://www.facebook.com/etinow>

Media Arts Club Cre8s
*Member*Sep - Dec, 2016
Seoul, Korea

- Held Raspberry Pi workshop for media arts.
- Produced hardware parts of works using CAD and 3D printer