

Seohyeon Cha

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EDUCATION	Korea Advanced Institute of Science and Technology (KAIST), M.S. in School of Electrical Engineering ▪ Advisor: Prof. Joonhyuk Kang ▪ Focus: Conformal prediction, Bayesian learning, graph learning ▪ Cumulative GPA: 4.17 / 4.3 B.S. in School of Electrical Engineering ▪ Cumulative GPA: 4.03 / 4.3 (<i>Summa Cum Laude</i>) ▪ Major GPA: 4.10 / 4.3	Mar 2022 – Presents Mar 2017 – Feb 2022
INTEREST	Uncertainty Estimation for Machine Learning, Model Calibration, Robust Learning	
PUBLICATIONS	PREPRINT [P1] Honggu Kang, Seohyeon Cha ² , Jinwoo Shin, Jongmyeong Lee, and Joonhyuk Kang, “NeFL: Nested Federated Learning for Heterogeneous Clients,” under-review. [pdf][code] CONFERENCES [C1] Seohyeon Cha ¹ , Sanghyuk Kim, Jiwan Seo, and Joonhyuk Kang, “Intelligent Surface-aided Transmit-array Antenna in mmWave Communication System with Historical Channel Observation,” in <i>IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)</i> , 2022. [pdf][code]	
RESEARCH EXPERIENCE	Advanced Radio Technology Lab (ARTLab), KAIST ▪ Efficient Calibration of Bayesian Models with Conformal Prediction • Detail: Control credible region via Bayesian temperature for calibration purpose • Supervisors: Prof. Joonhyuk Kang and Dr. Sangwoo Park • Focus: Conformal prediction, variational inference ▪ Spectrum Challenge Project • Detail: Deep learning based spectrum sensing • Sponsor: Electronics and Telecommunications Research Institute (ETRI) • Focus: Spectrum sensing, signal classification, multi-label classification ▪ Intelligent Transmitting Surface Research • Detail: SGD-based algorithm with historical channel observations in intelligent surface • Sponsor: Agency for Defense Development / Specialized Research Center • Focus: Intelligent surface, Millimeter-wave system Undergraduate Research Program (URP), KAIST ▪ Study on data valuation and learning algorithm using data value • Detail: Analysis on memorization and forgetting events of data • Supervisor: Prof. Hyewon Chung • Focus: Data valuation, Outlier detection	Jan 2023 – Present Mar 2022 – Present Jul 2022 – Sep 2022 Dec 2020 – Jun 2021
AWARDS & SCHOLARSHIPS	National Sciences and Engineering Scholarship, Korea Student Aid Foundation Korean Governmental Scholarship Korean Governmental Scholarship (Graduate)	2018 – 2020 2017 – 2018 2022 – Present
TEACHING EXPERIENCE	Research Assistant, KAIST ▪ Covered machine learning theory and implementation through pytorch Teaching Assistant, KAIST ▪ EE205 Data Structures and Algorithms for Electrical Engineering	Mar 2023 – Present Sep 2022 – Dec 2022

OTHER ACTIVITIES	Counseling Assistant for undergraduate/graduate students, KAIST <ul style="list-style-type: none"> ▪ Counseled 32 students with topics on grades, career, and relationships 	Sep 2022 – Feb 2023
	Tutoring for freshman students, KAIST <ul style="list-style-type: none"> ▪ Courses: MAS101 Calculus 1, MAS102 Calculus 2 ▪ Taught calculus and problem solving to freshmen for semester 	2018 – 2019
	Internship, DRAM design department, SK hynix	Jun 2019 – Aug 2019
	Voice of KAIST (V.O.K), Producer <ul style="list-style-type: none"> ▪ Made videos and wrote scripts for events and festivals in KAIST ▪ Played role of broadcasting a radio and writing scripts during semester 	2017 – 2019
LANGUAGE & SKILLS	Fluent in English and Native in Korean TOEFL 105 (R30/L29/S23/W23) Proficient in Python, Pytorch, MATLAB	
REFERENCES	<ul style="list-style-type: none"> ▪ Prof. Junhyuk Kang Professor of Electrical Engineering Korea Advanced Institute of Science and Technology (KAIST) 291 Daehak-ro, Yuseong-gu, Daejeon, 305-701, Korea jkang@kaist.ac.kr • +82.042.350.7422 	

[CV compiled on 2023-08-16]