

# HUN NAMKUNG

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## RESEARCH INTEREST

My research interest lies in the intersection between **network telemetry** and **programmable network devices**. Sketch-based network telemetry system will give network operators far more fine-grained and richer visibility into the network compared to the state-of-the-art sampling-based technique (e.g., NetFlow). My works solve practical problems of sketch deployment in both data and control plane so that sketch-based network telemetry on programmable switches become feasible and practical.

## EDUCATION

<b>Carnegie Mellon University (CMU), Pittsburgh, PA.</b> Ph.D. student, Electrical and Computer Engineering Department Advisor: Peter Steenkiste and Vyas Sekar	SEP '16 - AUG '17, JAN '19 - PRESENT
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<b>Olin College of Engineering, Needham, MA.</b> Exchange Student	FEB '10 - MAY '10
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<b>Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea.</b> B.S. in Computer Science	FEB '08 - JUN '16
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## PUBLICATION

**Sketchovsky: Enabling Ensembles of Sketches on Programmable Switches (under submission to NSDI '23)**

Hun Namkung, Zaoxing Liu, Daehyeok Kim, Vyas Sekar, Peter Steenkiste

<b>SketchLib: Enabling Efficient Sketch-based Monitoring on Programmable Switches</b>	NSDI'22
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Hun Namkung, Zaoxing Liu, Daehyeok Kim, Vyas Sekar, Peter Steenkiste

In 19th USENIX Symposium on Networked Systems Design and Implementation (NSDI) 2022

<b>Telemetry Retrieval Inaccuracy in Programmable Switches: Analysis and Recommendations</b>	SOSR'21
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Hun Namkung, Daehyeok Kim, Zaoxing Liu, Vyas Sekar, Peter Steenkiste

In Proceedings of the Symposium on SDN Research (SOSR) 2021, published as short paper

<b>Jaen: A high-performance switch-native approach for detecting and mitigating volumetric ddos attacks with programmable switches</b>	SECURITY'21
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Zaoxing Liu, Hun Namkung, Georgios Nikolaidis, Jeongkeun Lee, Changhoon Kim, Xin Jin, Vladimir Braverman, Minlan Yu, and Vyas Sekar

In 30th USENIX Security Symposium (USENIX Security) 2021

<b>Sketchy With a Chance of Adoption: Can Sketch-Based Telemetry Be Ready for Prime Time?</b>	TAPoP'21
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Zaoxing Liu, Hun Namkung, Anup Agarwal, Antonis Manousis, Peter Steenkiste, Srinivasan Seshan, and Vyas Sekar

In 2021 IEEE 7th International Conference on Network Softwarization (NetSoft) 2021

<b>Enabling Automatic Protocol Behavior Analysis for Android Applications</b>	CoNEXT'16
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Jeongmin Kim, Hyunwoo Choi, Hun Namkung, Woohyun Choi, Byungkwon Choi, Hyunwook Hong, Yongdae Kim, Jonghyup Lee, and Dongsu Han

In Proceedings of the 12th International Conference on emerging Networking EXperiments and Technologies (CoNEXT) 2016

## WORK EXPERIENCE

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<b>Line Corporation, South Korea.</b> <i>Machine Learning Engineer</i> <ul style="list-style-type: none"><li>Line messenger serves 224M MAUs worldwide</li></ul>	OCT '17 - OCT '18
<b>Frankly Co, San Francisco, CA.</b> <i>iOS Developer</i> <ul style="list-style-type: none"><li>Frankly was a start up company that developed a mobile instant messenger with ephemeral messages</li></ul>	APR '13 - AUG '14
<b>U.S. Army, Camp Casey, South Korea.</b> <ul style="list-style-type: none"><li>As a member of KATUSA (Korean Augmentation To the United States Army) Program</li></ul>	JUN '11 - MAR '13

## TEACHING EXPERIENCE

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<b>Teaching Assistant</b> , Computer Networks (18-441) at CMU	SPRING '22
<b>Teaching Assistant</b> , Network Security (18-731) at CMU	SPRING '20
<b>Teaching Assistant</b> , Introduction To Programming (CS101) at KAIST	SPRING '15

## HONOR AND AWARDS

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<b>Dean's List for Academic Excellence</b>	DEC '14
<b>KAIST Academic Excellence Scholarship</b> Top 4 students in computer science department	DEC '14
<b>12th place in 2010 ICPC Korea National Programming Contest</b>	OCT '10
<b>10th place in 2009 ICPC Korea National Programming Contest</b>	OCT '09
<b>Full Scholarship from KAIST (4 year)</b>	FEB '08
<b>Korea Olympiad in Informatics - Bronze</b>	AUG '06
<b>Seoul regional contest of Korea Olympiad in Informatics - Gold</b>	JUN '06