

# Sangyoon Lee

---

CONTACT	Ph.D. student School of Computing, KAIST <i>Email:</i> pinetree408@gmail.com <i>URL:</i> <a href="http://github.com/pinetree408">http://github.com/pinetree408</a>	Kim Byung Ho IT Building (N1) #722 KAIST, 291 Daehak-ro, Yuseong-gu Daejeon 34141, Republic of Korea
RESEARCH INTERESTS	Laptop-based Interaction, Pen-based Interface, Touch Interface, Voice User Interface, Dual-language-based Interface, HCI X AI	
EDUCATION	<b>Korea Advanced Institute of Science and Technology (KAIST)</b> Ph.D. student in Computer Science <i>Advisor:</i> Geehyuk Lee, Ph.D.	Daejeon, Korea MAR. 2018 – Present
	<b>Korea Advanced Institute of Science and Technology (KAIST)</b> M.S. in Computer Science <i>Thesis:</i> “Diagnosing and Coping with Mode Errors in using a Dual-language Keyboard” <i>Advisor:</i> Geehyuk Lee, Ph.D.	Daejeon, Korea 2018
	<b>Korea Advanced Institute of Science and Technology (KAIST)</b> B.S. in Computer Science	Daejeon, Korea 2016
PUBLICATIONS	<b>International Conference and Journal Papers</b> <ol style="list-style-type: none"><li>1. <b>WristDial: An Eyes-Free Integer-Value Input Method by Quantizing the Wrist Rotation</b> Eunhye Youn, <b>Sangyoon Lee</b> Sunbum Kim, Youngbo Aram Shim, Liwei Chan, Geehyuk Lee IJHCI 2021</li><li>2. <b>ThroughHand: 2D Tactile Interaction to Simultaneously Recognize and Touch Multiple Objects</b> Jingun Jung, Sunmin Son, <b>Sangyoon Lee</b>, Yeonsu Kim, and Geehyuk Lee CHI 2021</li><li>3. <b>FS-Pad: Video Game Interactions with a Force Feedback Gamepad</b> Youngbo Aram Shim, Keunwoo Park, <b>Sangyoon Lee</b>, Jeongmin Son, Taeyun Woo, and Geehyuk Lee UIST 2020</li><li>4. <b>MirrorPad: Mirror on Touchpad for Direct Pen Interaction in the Laptop Environment</b> <b>Sangyoon Lee</b>, Youn-kyung Lim, Geehyuk Lee CHI 2020</li><li>5. <b>Voice+Tactile: Augmenting In-vehicle Voice User Interface with Tactile Touchpad Interaction</b> Jingun Jung, <b>Sangyoon Lee</b>, Jiwoo Hong, Eunhye Youn, and Geehyuk Lee CHI 2020</li><li>6. <b>Diagnosing and Coping with Mode Errors in Korean-English Dual-language Keyboard</b> <b>Sangyoon Lee</b>, Jaeyeon Lee, Geehyuk Lee CHI 2019</li><li>7. <b>Auto-switching List Search Interface for Touchscreen Smartwatches</b> Jingun Jung, <b>Sangyoon Lee</b>, Sunggeun Ahn, and Geehyuk Lee MobileHCI 2018</li></ol> <b>Domestic Conference Papers</b> <ol style="list-style-type: none"><li>1. <b>Diagnosing and Coping with Annotation Distribution Problem in PDF</b> <b>Sangyoon Lee</b> and Geehyuk Lee HCI Korea 2020</li></ol>	

2. **First Principles Study of spin polarization in Fe-doped monolayer C2N-h2D**  
Sangyoon Lee and Geumbi Jung  
EDISON Challenge 2016
3. **Band Structure Engineering of Monolayer MoS2 by Surface Ligand Functionalization**  
Sangyoon Lee and Sufyan Ramzan  
EDISON Challenge 2015
4. **An Experimental Comparison of User Postures Between Tablet-based Reading Activities and Book-based Reading Activities**  
Sangyoon Lee  
KCC 2015

#### Extended Abstracts: Posters and Demos

1. **Verge-it: Gaze Interaction for a Binocular Head-Worn Display using Modulated Disparity Vergence Eye Movement**  
Sunggeun Ahn, Jeongmin Son, Sangyoon Lee and Geehyuk Lee  
CHI 2020
2. **MirrorPad: A Touchpad for Direct Pen Interaction on a Laptop**  
Sangyoon Lee and Geehyuk Lee  
ISS 2019

#### Patents

1. **COMPUTER SYSTEM FOR PROVIDING TACTILE INTERFACE FOR REAL-TIME TWO-DIMENSIONAL TACTILE INPUT/OUTPUT INTERACTION OF VISUALLY IMPAIRED PEOPLE, AND OPERATING METHOD THEREOF**  
US Patent Application. 17687011, 2022-03-04.
2. **METHOD FOR INPUTTING GAZE FOR DISPLAY AND DEVICES PERFORMING THE SAME**  
US Patent Application. 11023042, 2021-06-01.
3. **Method of Converting Word and Apparatuses Performing the Same**  
KR Patent Application. 10-2019-0060681, 2020-12-24.

#### WORK EXPERIENCE

<b>Steinfeld</b> AI Researcher - 3D Reconstruction and Image Translation <i>Skills:</i> Pytorch, GCP, OpenCV, PyMeshLab	APR. 2021 – Present
<b>Gold Spoon</b> Software Engineer, Co-Founder - Backend engineer <i>Skills:</i> Django, Go, Meteor, MongoDB, AWS, React.js, Youtube API	MAY. 2015 – FEB. 2016
<b>Langpoo</b> Software Engineer - Backend engineer <i>Skills:</i> Django, AWS, RabbitMQ, Android GCM	JAN. 2015 – MAR. 2015
<b>Graduate School of Science and Technology Policy, KAIST</b> Work-study Program - Homepage renewal	JUN. 2014 – JAN. 2015

	<b>Computational Nanotech Lab, KAIST</b> Research Intern & Software Engineer - Hybrid Interface Materials DB construction - Application of the Machine Learning Algorithm to Electronic Structure Calculations <i>Skills:</i> Django, Mysql, Scikit-learn, Machine Learning techniques, Tensorflow <i>Publications:</i> <ol style="list-style-type: none"> <li>1. <b>Application of the Machine Learning Algorithm to Electronic Structure Calculations: A Test Case of B/N-doped Graphene</b>              Kim, et al              KPS, 2016.              - Contribution in developing the web application &amp; machine learning techniques.</li> </ol>	JAN. 2014 – DEC. 2015
	<b>Interactive Computing Lab, KAIST</b> Research Intern - Machine State Estimation Using Electric Current Measurement Sensor <i>Skills:</i> Android	JAN. 2014 – MAR. 2014
	<b>Social Computing Lab, KAIST</b> Research Intern & Software Engineer - User Depression Mitigation Project <i>Skills:</i> Facebook login API, Flask, Django, Html, Javascript, CSS <i>Publications:</i> <ol style="list-style-type: none"> <li>1. <b>Manifestation of Depression and Loneliness on Social Networks: A Case Study of Young Adults on Facebook</b>              Park, Sungkyu, et al              CSCW, 2015.              - Contribution in developing the web application.</li> </ol>	MAY. 2013 – JUN. 2015
	<b>Intelligence in Science &amp; Technology, KISTI</b> Summer Intern - Big data(scientist's bio) analysis and processing <i>Skills:</i> Mysql, Java, Hadoop, MapReduce	JUN. 2013 – AUG. 2013
ACTIVITIES	<b>CS Undergraduate Student Council, KAIST</b> President	JAN. 2014 – JAN. 2015
	<b>CS Undergraduate Student Council, KAIST</b> Vice Representative of '12	JAN. 2013 – JAN. 2014
AWARDS	<b>CHI '21 Paper</b> Honorable Mention Award	Spring 2021
	<b>Google '20 Student Travel Grant</b> Student Travel Grant	Spring 2020
	<b>Naver '19 PhD Fellowship</b> PhD Fellowship Award	Fall 2019
	<b>ISS '19 Demonstration</b> Honorable Mention Demo Award	Fall 2019
	<b>UIST '17 Student Innovation Contest</b> People's Choice award	Fall 2017
OPEN SOURCE CONTRIBUTION	<b>Konlpy, Konlpy</b> Python package for Korean natural language processing	MAY. 2016 – Present

Url: <https://github.com/konlpy/konlpy>

**PinPoint, Naver**

DEC. 2014 – Present

Pinpoint is an open source APM (Application Performance Management) tool for large-scale distributed systems written in Java

Url: <https://github.com/naver/pinpoint>

TEACHING  
EXPERIENCE

**Teaching Assistant**

CS330 Operating Systems and Lab

Fall 2020

CS584 Human-Computer Interaction

Fall 2019

CS550 Software Engineering

Spring 2019

CS584 Human-Computer Interaction

Fall 2018

CS420 Compiler Design

Fall 2016

CS220 Programming Principles

Spring 2016

**Tutor**

CS311 Computer Architecture

Fall 2016

INVITED TALKS

**Coping with Mode Errors in Dual-language Keyboard**

OCT. 2019

Hancom TechDay, Hancom

PROJECTS

**Development of 5G based low latency device – edge cloud interaction technology** APR. 2020 – Present

Development of low-latency multi-participant collaborative interaction technology that analyzes and reflects user interaction experience response in virtual-real space linked VR/AR contents on 5G network

- Supported by Institute for Information & communications Technology Promotion(IITP) grant funded by the Korea government(MSIT)

**SuggestBot**

SEP. 2017 – MAR. 2021

SuggestBot is a software component that identifies the user's needs and suggests an action

- Supported by Next-Generation Information Computing Development Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Science

ACADEMIC  
SERVICES

**Reviewer**

AH' 20, CHI' 19, MobileHCI' 19