# Minsuk Chang

PH.D. STUDENT

*Georgia Institute of Technology  ·  School of Interactive Computing*

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## About

My primary research interests lie in Human-Computer Interaction (HCI) and Information Visualization. I am particularly interested in the graphical perception of humans and the ways in which individuals interpret and understand various visualizations and charts. I primarily target my research towards visualization and HCI venues such as IEEE VIS, IEEE TVCG, and ACM CHI.

## Education

**Georgia Institute of Technology**                                                                    *Atlanta, GA*
PH.D. STUDENT                                                                                          *2024.08 -*
- School of Interactive Computing
- Advisor: Dr. Cindy Xiong Bearfield

**Seoul National University**                                                                          *Seoul, Korea*
BACHELOR OF SCIENCE                                                                                    *2018.03 - 2024.02*
- Major: Computer Science and Engineering
- GPA: 3.61/4.3 (In-Major 3.75)

## Publications

PUBLISHED

Assessing Graphical Perception of Image Embedding Models using Channel Effectiveness.  Soohyun Lee, **Minsuk Chang**, Seokhyeon Park, and Jinwook Seo. 2023 IEEE Visualization and Visual Analytics (IEEE VIS)

CLeVer: Continual Learning Visualizer for Detecting Task Transition Failure. **Minsuk Chang** et al. IEEE PacificVis '24

Tensor Space Model-based Textual Data Augmentation for Text Classification. **Minsuk Chang**, Han-Joon Kim. IEEE BigData '23

PRE-PRINTS

Extracting Human Attention through Crowdsourced Patch Labeling. **Minsuk Chang** et al. arXiv preprint arXiv:2403.15013, 2024

## Research Experience

**Seoul National University - Human-Computer Interaction Lab**
ADVISOR: PROF. JINWOOK SEO                                                                             *July. 2023 - July. 2024*

**University of Seoul - Data Mining Lab**
ADVISOR: PROF. HAN-JOON KIM                                                                            *Sept. 2022 - Feb. 2024*

**Seoul National University - Human-Centered System Lab**
ADVISOR: PROF. YOUNGKI LEE                                                                             *April. 2022 - June. 2022*

## Industrial Experience

**Naver Appolo Dev.**                                                              *Pangyo, Korea*
UNDERGRADUATE INTERNSHIP                                                    *Jan. 2023 - Feb. 2023*
- Interned at Naver Corporation and researched how to extract trending topics from user-generated content. Learned non-ML techniques for analyzing time-series data. Used different clustering methods and seasonal algorithms to identify topics linked to specific dates.

**PrompTechnology**                                                                *Seoul, Korea*
WEB DEVELOPMENT INTERNSHIP                                                 *July. 2022 - Aug. 2022*
- Worked on modules for the Public Data Portal run by the Ministry of Public Administration and Security. Created an improved cache system to handle high traffic, up to 100 API calls per second. Gained experience with MSA architecture and learned multiple languages and protocols like golang, typescript, and grpc.

**Airforce, Republic of Korea**                                                          *Korea*
SYSTEM MANAGEMENT ASSISTANT                                              *Sept. 2020 - March. 2022*
- Served in the military as a system management assistant in the Korea Air Force. Managed various database servers and tactical systems. Learned about potential system failures and how to address them effectively.

**PrompTechnology**                                                                *Seoul, Korea*
WEB DEVELOPMENT INTERNSHIP                                                 *July. 2020 - Aug. 2020*
- Interned at PrompTechnology and served as a project manager. Developed a survey platform web service using Node.js and Express.js. Gained practical skills in building commercial services. Collaborated with the Graduate School of Public Health at Seoul National University to develop a mental care application for COVID-19 self-quarantine.

## Competitions & Projects

**Reinforcement Learning for Game Yahtzee**
PERSONAL PROJECT                                                                   *2021 - 2022*
- Inspired by Reinforcement Learning, developed a Deep Q Network-based AI which plays the board game Yahtzee. Adjusted the model and hyper-parameters to surpass human average scores of 200. Codes and reports are available on GitHub.

**AI Hackathon Competition**
THE 3RD AI X BOOKATHON BY SKKU&MINDSLAB                                          *Nov. 2021*
- Trained a GPT-2 model to write essays on the theme "Together." Used data collected from websites and preprocessed it. Project details and results are available on GitHub.

**CloudNews**
2021 MILITARY OPEN DATA COMPETITION BY ROKAF                               *May 2021 - July 2022*
- CloudNews is a web service designed to gather all military news and articles scattered around. Used OCR to extract newspaper's text data and visualized its keywords as a cloud map. Participated during military service (2020.06 - 2022.04)

## Awards, Fellowships, & Grants

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|---|---|---|
| Fall, 2023 | **Academic Achievement Scholarship (Fully Funded)**, Jeongheon Foundation | *$ 2,300* |
| Spring, 2023 | **Academic Achievement Scholarship (Fully Funded)**, Jeongheon Foundation | *$ 2,300* |

## Technical Skills

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|---|---|
| PL | **Python, C, Cuda, Javascript**, Advanced |
| Web | **NodeJS, Django, ReactJS, D3**, Advanced |

## English Proficiency

**TOEFL**
OVERALL SCORE: 112 (R:30, L:28, S:28, W:26)                                      *July, 8, 2023*