

# Heungseok Park

DATA SCIENTIST · VISUALIZATION ENGINEER/RESEARCHER

SeongNam-si, Rep. of KOREA

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“Be the change that you want to see in the world.”

## Profile

**Research/software engineer of Clova AI Research in NAVER.** Participated in projects building Visual Analytics for various domains. Currently working on as a data visualization researcher/engineer in a Cloud-based Machine Learning platform at Naver Corporation. Interested in data analysis since undergraduate years, specifically in data visualization. Intrigued by the quote that “Never trust summary statistics alone, always visualize your data”.

## Education

### KAIST (Korea Advanced Institute of Technology)

Daejeon, S.Korea

MASTER STUDENT IN GRADUATE SCHOOL OF CULTURE TECHNOLOGY

Mar. 2016 - Exp. Feb. 2018

- Research Assistant of Social Computing Lab
- Advisor: Wonjae Lee

### Ajou University

Suwon, S.Korea

BACHELOR OF DIGITAL MEDIA IN COLLEGE OF INFORMATION AND TECHNOLOGY

Mar. 2010 - Feb. 2016

- Academic Scholarships for 7 semesters
- Advisor: Kyungwon Lee

### University of Nevada, Las Vegas

Las Vegas, NV, U.S.

VISITING SCHOLAR IN HOWARD R. HUGHES COLLEGE OF ENGINEERING

Jan. 2015 - May. 2015

- Advisor: Si Jung Kim

## Work Experience

### Clova AI Research, NAVER

SeongNam, S.Korea

VISUALIZATION ENGINEER & FRONT-END WEB DEVELOPER

Feb. 2018 - Now

- Data visualization researcher/engineer for machine learning platform, including automated machine learning area

### 3Secondz

Daejeon, S.Korea

VISUALIZATION ENGINEER & FRONT-END WEB DEVELOPER

May. 2017 - Jan. 2018

- Main programmer of Car Racing Simulation part of Artificial Intelligence based Racing Coach Services.

### ERC (Entertainment Research Center) Lab.

Las Vegas, NV, U.S.

RESEARCH INTERN

Jan. 2015 - May. 2015

- Main programmer of Drone Orchestra Project.

## Research & Publications

- **Heungseok Park**, Jinwoong Kim, Minkyu Kim, Ji-hoon Kim, Jaegul Choo, Jung-Woo Ha, Nako Sung, “VisualHyperTuner: Visual Analytics for User-Driven Hyperparameter Tuning of Deep Neural Networks”, *In Proc. MLSys 2019*, demonstration track [paper].
- Jinwoong Kim, Minkyu Kim, **Heungseok Park**, Ernar Kusdavitov, Dongjun Lee, Adrian Kim, Ji-Hoon Kim, Jung-Woo Ha, and Nako Sung, “CHOPT : Automated Hyperparameter Optimization Framework for Cloud-Based Machine Learning Platforms”, *arXiv* [paper].
- Hanjoo Kim, Minkyu Kim, Dongjoo Seo, Jinwoong Kim, **Heungseok Park**, Soeun Park, Hyunwoo Jo, KyungHyun Kim, Youngil Yang, Youngkwan Kim, Nako Sung, and Jung-Woo Ha, “NSML: Meet the MLaaS platform with a real-world case study”, *arXiv* [paper].
- **Heungseok Park** and Wonjae Lee, “What makes a Successful Course at MOOCs? The Effects of the Structural Positions in Review Networks on the Course’s Popularity and Satisfaction”, *Master thesis*, [paper].
- **Heungseok Park**, Hongjun Lim, Wonjae Lee, and Kyungwon Lee, “NetSet: A Systematic integration of visualization for analyzing set intersections with network”, *In Proc. IEEE Pacific Visualization Symposium (PacificVis)*, Apr 2017 [paper] [video].
- Jee Jung Choi, Jungmin Kim, **Heungseok Park**, and Wonjae Lee, “Extracting Placeness from Social Media: an Ontology-Based System”, *In Proc. IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, Full paper, Aug 2017 [paper].
- **Heungseok Park**, Hongjun Lim, and Kyungwon Lee, “NetSet: Interactive Visualization for Analyzing Sets in Large Networks”, *IEEE VIS Conference, Visualization in Data Science (VDS) Symposium*, Poster, Oct 2015 [poster].

# Patent

## International

- “Apparatus for Visualizing Analysis of Set Relationship in Complex Network and Method Therefor”, Kyungwon Lee, Hongjun Lim, and **Heungseok Park**, *International Patent Application* PCT/KR2016/011868, Oct 2016 [document].

## Domestic

- “Apparatus and Method for Interactive Visualization for Analyzing Sets in Large Networks” Hongjun Lim, Kyungwon Lee, and **Heungseok Park**, *Korea Patent*, 10-1710606, Feb 2017 [document].
- “Apparatus and Method for Interactive Visualization in Analyzing Multidimensional data in Complex Networks”, **Heungseok Park**, *Korea Patent Pending*, 10-2016-0101233, Aug 2016 [document].

# Honors & Awards

Mar. 2015 **Outstanding Award**, UNLV CSUN Academic Poster Conference

*Las Vegas, NV, U.S.*

Dec. 2014 **Global Exchange Scholarship**, 15st Global Scholarship of Mirae-Asset Park Hyeon Joo Foundation

*Seoul, S.Korea*

# Project

## NSML: Naver Smart Machine Learning Platform

**NAVER**

FRONT-END WEB DEVELOPMENT, DATA VISUALIZATION

*Feb. 2018 - Now*

- Front-end, Visualization research for Machine Learning
- Main contributor of **AutoML visualization**, including **hyperparameter optimization, neural architecture search, and active learning**
- teck-talk [video]
- presented/introduced at DEVIEW 2018, SysML 2019, LINE Conference 2019, NAVER AI Colloquium 2019

## An Interactive Visualization System of car racing data for reviewing racers' past games.

**3Secondz**

FRONT-END WEB DEVELOPMENT, DATA VISUALIZATION

*May. 2017 - Jan. 2018*

- Front-end, Interactive visualization, Web-design
- Live at [demo]

## CommScope: An Interactive Visualization System of public opinions to 19th president candidates from Korean Online Community

**Laboratory Project**

FRONT-END WEB DEVELOPMENT, DATA VISUALIZATION

*Dec. 2016 - May. 2017*

- Front-end, Data analysis (text-mining), Interactive 3D network visualization, Web-design
- Live at [demo]
- Article at [Joonang Ilbo].

## Development of Data Mining Core Technologies for Real-time Intelligent Information Recommendation in Smart Spaces

**MSIP (Ministry of Science, ICT and Future Planning)**

RESEARCH ASSISTANT

*Oct. 2016 - Jul. 2017*

- Visualization of placeness difference between places using Choropleth map and Parallel coordinates

## Development of Information Collection and Analysis Technique on Public Opinion related to Nuclear Energy based on Artificial Intelligent Big Data

**Future Energy Policy Institute of Kyung Hee University**

RESEARCH ASSISTANT

*Oct. 2016 - Jun. 2017*

- Twitter data crawling, data processing, network analysis & visualization

## Research on Cultivation Plan of Technology Manpower against the Fourth Industrial Revolution

**NRF (National Research Foundation), Korea Polytechnics**

RESEARCH ASSISTANT

*Oct. 2016 - Jan. 2017*

- MOOC platform & online review community data crawling, data processing, network analysis & visualization

## Analysis of public opinions related to city issues based on Online Social Big Data

**Goyang City hall**

RESEARCH ASSISTANT

*Mar. 2017 - Jun. 2017*

- Twitter data crawling, data processing, network analysis & visualization

# Skills

<b>Programming</b>	JavaScript (d3.js, three.js, node.js, react.js), Python, R, STATA, LaTeX
<b>Tools</b>	Git, Adobe Illustrator, Premiere, Photoshop, Gephi, Processing
<b>Languages</b>	Korean, English