

Chaewon Ahn

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Academic Positions

Assistant Professor | Urban Studies | Yale-NUS College 2021. 6 - present

Education

Massachusetts Institute of Technology (MIT) 2016.9 – 2020. 6
PhD, Department of Urban Studies and Planning

- Title: Manufacturing Social Capital - Social networks through civic innovation initiatives in urban manufacturing clusters under development pressure in Seoul
- Advisor: Sarah Williams (MIT)
- Committee: Justin Steil (MIT), Elizabeth Reynolds (MIT)
- City Design and Development & Urban Information Systems group

Massachusetts Institute of Technology (MIT) 2013. 9 - 2015. 6
Master of science in Architecture studies (SMArchS) in Architecture and Urbanism, Department of Architecture

- Title: Ma(i)cro visions - Utilizing Social Network Service data for a transformational process of urban social space making
- Advisor: Michael Dennis (MIT), Sarah Williams (MIT)
- Reader: Luis Valenzuela (Universidad Adolfo Ibañez)

Korea National University of Arts (KARTS) 2006. 3 - 2012. 2
School of Visual Arts, Department of Architecture, RIBA Part 2 accredited
Bachelor of Architecture (BArch)

École Spéciale d'Architecture (ESA) 2009. 8 - 2009. 12
Exchange program, one semester

Prior Teaching Experience

Introduction to QGIS | Department of Architecture, University of Seoul 2020. 9
Instructor

- Taught a 4-session course on QGIS for the fifth-year architectural design studio
- Covered basic concepts, projection systems, basic visualizations, tile maps, data handling and joins, geocoding, foundation for spatial analysis, grids, map algebra, network analysis.

QGIS Workshop at the <Seoul, Smart> | Beta City Center, University of Seoul 2020. 8
Instructor

- A one-day introductory QGIS course at the <Seoul, Smart> round table

II.001 Introduction to Urban Design and Development | Department of Urban Studies and Planning, MIT 2018 Fall
Teaching Assistant to Prof. Lawrence Vale

- Contributed in the curriculum building of the urban data and smart cities literature
- Structured one of the main assignments to investigate urban form using qualitative observations and two of the provided geospatial data in two selected neighborhoods

under one of the themes of crime / mobility / environmental quality / neighborhood affordability

- Graded student assignments, and mentored students during office hours

II.205 Introduction to Spatial Analysis | Department of Urban Studies and Planning, MIT 2017 Fall (Half Semester)

Teaching Assistant to Prof. Sarah Williams

- Assisted two lab sessions per week
- Graded weekly assignments, and mentored students during office hours
- Contributed to the lab session and assignment material by testing them

II.520 Workshop on Geographic Information Systems | Department of Urban Studies and Planning, MIT 2017 Fall (Half Semester)

Teaching Assistant to Prof. Sarah Williams

- Assisted two lab sessions per week
- Mentored students during office hours from research design to presentation of the final GIS group project

Creating AXONOGRAPHY: From 2D to spatial sensory exhibition design | Department of Architecture, MIT 2017. I

Instructor. Co-instructed with Yihyun Lim, Bumjin Kim, Joshua Choi

- Designed and taught a 4 week-long Independent Activity Period (IAP) course on axonometric interpretations of everyday life

Research Experience

Digital Twin Sewoon | Seoul Business Agency 2019.II – 2020. I
Data visualization specialist

- A Digital-Twin-based Urban Regeneration Support Platform
- Designed and participated in the development of the ‘Sewoon Inventory’ as part of the ‘Digital Twin Sewoon’ project

Seoul Metropolitan Government, Historic City Regeneration Division 2019. 7 – 2019. 10
| Seoul, South Korea

Project Manager ‘Sewoon Urban Manufacturing Survey’

- Designed survey and interview
- Managed the deployment of the surveys and interviews
- Conducted data analysis and report writing

Civic Data Design Lab | Department of Urban Studies and Planning, MIT 2017. 8 – 2019. 6

Research Assistant

- Managed the ‘BenchMark’ project, wrote project report and journal article
- Participated in the exhibition design for the ‘Next Stop’ at the Coe Hewitt Museum
- Designed and installed the ‘Ghost Cities’ exhibition in the Seoul Architecture and Urbanism Biennale 2017
- Conducted spatial analysis for in the Fourth Regional Plan competition for the RPA

Center for Territorial Intelligence | Universidad Adolfo Ibañez, Santiago, Chile 2018. 7 – 2018. 8

Visiting researcher

- Designed and built web-based data visualization platform the ‘Observatory of Conflict’ project

MIT Election Science and Data Lab | Department political Science, MIT 2018. 2 – 2018.6

Research Assistant

- Designed and built web-based data visualization platform for the ‘Election landscape’ project

JTL Urban Mobility Lab | Department of Urban Studies and Planning, MIT 2016. 9 - 2017. 6

Research Assistant

- Conducted the Spatial analysis for the ‘Car pride’ project
- Presented the research at the AAG 2017
- Renewal and management of the JTL website

Senseable City Lab | Department of Urban Studies and Planning, MIT 2015.9 – 2016. 7

Research Associate, Data Visualization Specialist

- Project lead for ‘The New Gay Index’ project
- Data visualization and web design for the ‘Car as a sensing platform’, ‘Monitour’, ‘Light Traffic’, ‘Urban Lens’ project
- Presented the lab research in the Philips design seminar and at the Boston Society of Architecture (BSA)

Civic Data Design Lab | Department of Urban Studies and Planning, MIT 2015.7 - 8

Research Assistant

- Conducted data visualization for the ‘Industry in Motion’ project
- Designed and built the website for the ‘Crowdsourced city’ class and the ‘Digital Matatus’ project

Urban Metabolism Lab | Department of Architecture, MIT 2014. 6 - 7

Research Assistant

- Developed the literature review and cleaned data for the MIT campus material flow analysis

Research Interest

- Public spaces, participatory urban planning processes, governance systems
- Urban design politics
- GIS, spatial statistics, big data, social network analysis
- Sensors, participatory data collection
- Data Visualization
- History and Theory of urban data

Research Projects

Manufacturing Social Capital | Dissertation | Advisor: Sarah Williams 2019.7 – current
Examining the efficacy of new innovation district projects that include civic engagement programs to connect manufacturers to entrepreneurs, designers and makers in their ‘Maker city’, utilizing social network analysis methods complemented with interviews and ethnographic fieldwork.

The printing network seen through sensors | Sponsored by the City of Seoul 2020.7 – current

Developing a sensor system to track makeshift motorcycles that transport paper and printed products in the printing district of Seoul, to collect network data of how printing jobs of small printing manufacturers are interlinked through printing jobs.

Sewoon Education Governance | Advisor: Jie-Eun Hwang 2020.1 – 2020.3

Analyzing 508 educational governance programs that are comprised of 1,122 events between 2015 to 2020, which include workshops, lectures, tutorials, exhibitions to evaluate the educational community in the Sewoon area as a community of practice and transmission of tacit knowledge.

Online platform for creative urban manufacturing | Formali 2020.1 – 2020.3

Analyzed the typologies of operations, and workflow of the Sewoon technology connection office which introduces makers, entrepreneurs to fabricators in the area and contributed to the conception of an online platform that intermediates these new collaborations. Commissioned by the City of Seoul.

Sewoon Urban Manufacturing Survey | Seoul Metropolitan Government 2019. – 2020.1

Understanding the state of manufacturing in the Sewoon urban manufacturing district in the center of Seoul facing development pressure. The results were shared with the city and the firm commissioned to generate the new masterplan and published in August 2020.

Bench Mark | Civic Data Design Lab, MIT | Advisor: Sarah Williams 2019.7 – 2019.10

Measuring social interaction in public space through sensor laden smart furniture. Paper published in Environment and Planning B.

The Place for Decent Housing | DUSP, MIT | Advisor: Sarah Williams 2017.9 - 2018.1

Measuring spatial segregation of the low-income population and assessing the role of affordable housing policies in Chengdu, China using social housing data and real estate transaction data. Presented in ACSF 2017.

Cross Cultural Comparison of Car Pride | JTL urban mobility lab, MIT | Advisor: Jinhua Zhao 2016.9 – 2017.6

Spatial analysis on biases towards car usage, car ownership and bus usage in New York and Houston. Presented at the AAG Annual meeting in Boston 2017 April.

Car as a sensing platform | Senseable City lab, MIT | Advisor: Carlo Ratti 2016.9 - 2017.6

Analyzing sensor values collected through vehicles to understand the relationship between the built environment, weather conditions and the driving behavior.

The new gay index | Senseable City lab, MIT | Advisor: Carlo Ratti 2015.9 - 2016.6

Spatial analysis on dating app data to study the distribution, mobility and segregation of the gay population in US.

SMArchS Graduate Thesis | Department of Architecture, MIT 2015.9 - 2016.6

Developing a methodology to read social space through social network service data. Collected Instagram location data with Python, analysis in GIS in correlation to Census, Boston GIS data.

MIT Campus material flow analysis | Urban Metabolism lab, MIT | Advisor: John Fernandez 2014.9 - 2015.6

Literature review, data collection, and data analysis to apply material flow analysis in the MIT context. Collaboration with the Office of sustainability at MIT.

2014. 6 - 7

Data Visualization and Web Design

Digital Twin Seoul | Seoul Business Agency | PI: Jie-Eun Hwang 2019.II – 2020.I

Interactive website that visualizes the network of retail and manufacturing businesses in the Sewoon area based on the products and processes they treat. Coupled with a showcase websites of new design products that were made in collaboration with businesses in the network. Role: Web design, CSS, HTML, D3

<http://www.dtsewoon.kr/store>

**The Observatory of Conflict | Centro de Inteligencia Territorial,
Universidad Adolfo Ibañez** 2018. 7 – 2018. 8

Interactive visualization of the geographical patterns of protests, their involved actors and demands of protests in Chile. Role: Website design, CSS, HTML, Mapbox, D3

**Election Landscape of the United States | MIT Election Science and
Data Lab** 2018. 2 - 2018.6

Web based data visualization to display and share the data on variant implementation of election policies in the US. Role: Website design, CSS, HTML, Mapbox, D3

**Flocktracker | Department of Urban Studies and Planning | Advisor:
Christopher Zegras** 2016. 9 - 2016. II

Website for the data collection platform Flocktracker. Role: Web design, CSS, HTML

**Place-based Collaboration | Senseable City lab, MIT | Advisor: Carlo
Ratti** 2015. 9 - 2016. 6

Visualizing collaborations within the MIT community seen through paper and patent records. Role: Data Visualization, Video editing using after-effects

Monitour | Senseable City lab, MIT | Advisor: Carlo Ratti 2016. 9 – 2017. 6

Visualizing international electronic waste routes departing from the United States tracked through small GPS devices. Task: Website design, CSS, HTML

<http://senseable.mit.edu/monitour/>

Light Traffic | Senseable City lab, MIT | Advisor: Carlo Ratti

Reimagining the traffic light system for autonomous vehicles. Role: Diagrams, Website design, CSS, HTML

<http://senseable.mit.edu/light-traffic/>

**Digital Matatus Website | Civic Data Design lab, MIT | Advisor: Sarah
Williams** 2015. 6 – 2015. 8

Web design of the Digital Matatus website. Role: Website design, CSS, HTML, JavaScript

<http://www.digitalmatatus.com/>

**Crowd Sourced City Website | Civic Data Design lab, MIT | Advisor:
Sarah Williams** 2015. 9 - 2016. 6

Web design of the Crowd Sourced City Class website. Role: Web design, CSS, HTML, JavaScript

<http://www.crowdsourcedcity.com/>

Story Board | Crowd Sourced City Class, MIT | Advisor: Sarah Williams | Client: ERASE RACISM 2015. 3 – 2015. 6
 Website that crowdsources stories on structural racism. Role: Website design, CSS, HTML, JavaScript, IFTTT, Fusion Tables

Publications

Kang, W., Hwang, J., Shim, H., Ahn, C. (2020) **Sewoon Urban Manufacturing Survey**. Seoul, South Korea: Seoul Metropolitan government. 2020

Williams, S., Ahn, C. Gunc, H., Ozgirin, E., Pearce, M., Xiong, Z. (2019). **Evaluating sensors for the measurement of public life: A future in image processing**. Environment and Planning B: Urban Analytics and City Science, DOI: 10.1177/2399808319852636 2019

Massaro, E., Ahn, C., Ratti, C., Santi, P., Stahlmann, R., Lamprecht, A., ... & Huber, M. (2016). **The car as an ambient sensing platform [point of view]**. Proceedings of the IEEE, 105(1), 3-7. 2016

Ahn, C. (2015). **Ma(i)cro visions : utilizing social network service data for a transformational process of urban social spaces** (S.M., Massachusetts Institute of Technology, Department of Architecture). Retrieved from <http://dspace.mit.edu/handle/1721.1/7582> 2015

SENSEable City Guide to Pune, Wood Buffalo & Dallas | MIT School of Architecture and Planning * 2014. 8

KIA Convention and Exhibition 'Creative community' | Korean Institute of Architects * 2011. 11. 11

Adaptive re-use of camp Hialeah | DOCOMOMO-KOREA * 2011. 9.30

*contribution = **

Media Appearance

The reason why the CEO of a 45-year-old engine company visited the 65-year-old Cheonggyecheon foundry | Donga Science, 2020.8.22 | <http://dongascience.donga.com/news.php?idx=39107> 2020.8

2020 Sewoon Global Forum: Urban Manufacturing, Now Again (t) Seoul | Space magazine, vol. 663 | https://vmSPACE.com/report/report_view.html?base_seq=MTExOQ== 2020. 8

"The future of Busan; What is the Future of Camp Hialeah?" | Space magazine, vol. 524 2011. 7

"ZOOM IN: Competition 8th DOCOMOMO-Korea Design Competition" | ELA magazine, vol. 297 2011. 7

"Docomomo competition; adaptive re-use of camp Hialeah" | WIDE architecture report magazine, vol. 22 2011. 7

Professional Experience

KIOHUN architects and associates Seoul, Korea <i>Intern Architect</i>	2012. II – 2013. 4
Artist Kyuchul Ahn Seoul, Korea <i>Assistant</i>	2011. I
Pantech Headquarter Renovation proposal Seoul, Korea	2010. 12
Artist Kyuchul Ahn Seoul, Korea <i>Assistant</i>	2010. 7
Architectural Design Units UA Seoul, Korea <i>Intern Architect</i>	2010. 2
Ateliers Lion Seoul Seoul, Korea <i>Intern Architect</i>	2009. I
KIOHUN architects and associates Seoul, Korea <i>Intern Architect</i>	2008. 12

Exhibitions and Presentations

Manufacturing Social Capital: Visualizing Social Networks Through Civic Innovation Initiatives in Urban Manufacturing Clusters Under Development Pressure ACSP 60th Annual Conference, Online	2020.II.4
Manufacturing Social Capital MLA Studio, National University of Singapore Presented dissertation research at the LA5701 MLA Studio ‘Pandemic Disruptions’	2020.9.4
Sewoon Global Forum ‘Local-Recall’ Urban Manufacturing, Now Again Seoul Presented the Sewoon manufacturing survey as part of a conversation of three cities of Seoul, NYC, and Brussels, about the challenges in urban manufacturing in the COVID19 context. The talk is available on Youtube: https://youtu.be/hUclNk6G6FE	2020.6.18
Data Activism and Urban Planning: Grassroots approach ‘Ecology of Things’ cross studio, University of Seoul Introductory lecture on the history and positions around bottom-up civic tech on sensors, map making, and urban planning.	2020.5.12
HCI@ KAIST seminar School of Computing, KAIST, Daejeon Presented the projects at the Senseable City lab, Civic Data Design Lab and my dissertation research at the Human Computer Interaction seminar at the KAIST Interaction Lab	2020.1.7
Mapping Social Systems Department of Civil and Environmental Engineering, KAIST, Daejeon Presented the projects at the Senseable City lab, Civic Data Design Lab and my dissertation research at the Maturepolis Lab Seminar Series	2019.12.2
NextStop THE ROAD AHEAD: REIMAGINING MOBILITY, Cooper Hewitt the Smithsonian Design Museum, NYC Interactive analog and digital experience aimed at eliciting visitors’ perceptions of how future mobility options will impact societal transit equity, access, and utilization.	2018.12.14 – 2019.3.31
The Place for Decent Housing: The Impact of Affordable Housing Provision on the Spatial Segregation of the Urban Poor in Chengdu, China ACSP 57th Annual Conference, Denver, Colorado	2017.10.12
Ghost Cities of China 2017 SEOUL BIENNALE OF ARCHITECTURE AND URBANISM Interactive exhibition on the Ghost Cities of China research project at the Civic Data Design Lab. Design, fabrication and installation of the exhibition booth.	2017.8.2 – 2017.11.5

Geography of 'Car Pride' in New York and Houston 2017 AAG annual meeting, Boston	2016.5.4
DATA VISUALIZATION talk MIT Department of Urban Planning, Cambridge, MA Introduced the role and data visualization processes in the SENSEable City Lab. Collaborator: Paul Buisset	2015. 3 – 2015. 6
RENEWABLE FUTURES 2015 conference Riga, Latvia Presented master's thesis "Ma(i)cro Visions" in "Mapping Complexity and Post-media Architecture" session organized by Lev Manovich.	2015.10.8
2014 Howard T. Fisher Prize for Excellence in GIS Harvard University Exhibited "Mapping Boston's Public Space, Evidence from 60,000 Instagram Posts". Collaborator: Yunjie Li	2014.5.19
The 8th Collections of Excellent Graduation Theses Choongang university R&D center, Seoul, Korea Exhibited "Forming community through a network of places" in poster session	2012.4.28
UA Graduation Exhibition Korea National univ. of Arts, Department of Architecture BArch graduation exhibition. Presented Model and panel for "Individual Community"	2011.12.13
2011 KIA Exhibition Mokdong Korean Center of art, Seoul, Korea Exhibited "Individual community" at student session of the annual exhibition of Korean Institute of Architects	2011.11.11
The 15th Hongik Street art Exhibition 'High & Low' Hongik University, Seoul, Korea Installed temporary urban furniture. Collaborator: Jiyeon Gu, Yeonjoo Kang, Yoona Choi, Minji Kim	2007.9.12

Honors and Awards

CIS Summer Study Grant MIT Center for International Studies	2020.6
Department tuition Fellowship year 2 Massachusetts Institute of Technology	2015.6
Department tuition Fellowship year 1 Massachusetts Institute of Technology	2013.9
Graduate Fellowship Award (Declined) Cornell University, MArch 2	2013.9
Second Prize The 8th Collections of Excellent Graduation Theses competition Architectural Institute of Korea	2012. 4. 28
Selected work The 30th KIA Convention Design competition 'Creative community' Architectural Institute of Korea	2011. 11. 12
The Grand Prize The 8th DOCOMOMO_Korea Design Competition Docomomo Korea	2011. 6. 2
Department tuition scholarship (highest level) Korea National University of Arts	2011. 3
Department tuition scholarship (second level) Korea National University of Arts	2010. 3
Big tree scholarship design tour in Europe for selected students Changjo Architects INC.	2008. 7. 1
Department tuition scholarship (highest level) Korea National University of Arts	2008. 9
Department tuition scholarship (highest level) Korea National University of Arts	2007. 9
Admission scholarship (highest level) Korea National University of Arts	2006. 3

Skills

ArcGIS, QGIS, Rhinoceros, Grasshopper, Adobe Suite (Photoshop, Illustrator, Indesign, After Effect), HTML, CSS, R, D3, Javascript, Mapbox, Leaflet, Python, Arduino