Chaewon Ahn

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Appointment

Assistant Professor, Urban Studies, Yale-NUS College   2021. 7 - current

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

Teaching Experience

Geospatial and Demographic Methods (GIS) | Urban Studies, Yale-NUS College   2021. Semester 1
Instructor
- Urban studies major elective as one of the Methods classes
- Lecture and lab to develop a reflexive practice in GIS with students

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

11.001 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

11.205 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

11.520 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. 1
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
2019.11 – 2020. 1
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 | Seoul, South Korea
2019. 7 – 2019. 10
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 Cooer 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 ACSP 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   2019.11 – 2020.1

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 Intelegencia 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. 11

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 Buffallo & 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 (1) 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   2011. 7
architecture report magazine, vol. 22

Professional Experience

KIOHUN architects and associates | Seoul, Korea | *Intern Architect*   2012. 11 – 2013. 4
Artist Kyuchul Ahn | Seoul, Korea | *Assistant*   2011. 1
Pantech Headquarter Renovation proposal | Seoul, Korea   2010. 12
Artist Kyuchul Ahn | Seoul, Korea | *Assistant*   2010. 7
Architectural Design Units UA | Seoul, Korea | *Intern Architect*   2010. 2
Ateliers Lion Seoul | Seoul, Korea | *Intern Architect*   2009. 1
KIOHUN architects and associates | Seoul, Korea | *Intern Architect*   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   2020.11.4

Manufacturing Social Capital | MLA Studio, National University of Singapore   2020.9.4
Presented dissertation research at the LA5701 MLA Studio 'Pandemic Disruptions'

Sewoon Global Forum 'Local-Recall' Urban Manufacturing, Now Again | Seoul   2020.6.18
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

Data Activism and Urban Planning: Grassroots approach | 'Ecology of Things' cross studio, University of Seoul   2020.5.12
Introductory lecture on the history and positions around buttom-up civic tech on sensors, map making, and urban planning.

HCI@ KAIST seminar | School of Computing, KAIST, Daejeon   2020.1.7
Presented the projects at the Senseable City lab, Civic Data Design Lab and my dissertation research at the Human Computer Interaction semiar at the KAIST Ineraction Lab

Mapping Social Systems | Department of Civil and Environmental Engineering, KAIST, Daejeon   2019.12.2
Presented the projects at the Senseable City lab, Civic Data Design Lab and my dissertation research at the Maturepolis Lab Seminar Series

NextStop | THE ROAD AHEAD: REIMAGINING MOBILITY, Cooper Hewitt the Smithsonian Design Museum, NYC   2018.12.14 – 2019.3.31
Interactive analog and digital experience aimed at eliciting visitors' perceptions of how future mobility options will impact societal transit equity, access, and utilization.

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   2017.8.2 –
                                                               2017.11.5
Interactive exhibition on the Ghost Cities of China research project at the Civic Data Design
Lab. Design, fabrication and installation of the exhibition booth.

Geography of 'Car Pride' in New York and Houston | 2017 AAG annual   2016.5.4
meeting, Boston

DATA VISUALIZATION talk | MIT Department of Urban Planning,   2015. 3 – 2015. 6
Cambridge, MA
Introduced the role and data visualization processes in the SENSEable City Lab.
Collaborator: Paul Buisset

RENEWABLE FUTURES 2015 conference | Riga, Latvia   2015.10.8
Presented master's thesis "Ma(i)cro Visions" in "Mapping Complexity and Post-media
Architecture" session organized by Lev Manovich.

2014 Howard T. Fisher Prize for Excellence in GIS | Harvard University   2014.5.19
Exhibited "Mapping Boston's Public Space, Evidence from 60,000 Instagram Posts".
Collaborator: Yunjie Li

The 8th Collections of Excellent Graduation Theses | Choongang   2012.4.28
university R&D center, Seoul, Korea
Exhibited "Forming community through a network of places" in poster session

UA Graduation Exhibition | Korea National univ. of Arts, Department of   2011.12.13
Architecture
BArch graduation exhibition. Presented Model and panel for "Individual Community"

2011 KIA Exhibition | Mokdong Korean Center of art, Seoul, Korea   2011.11.11
Exhibited "Individual community" at student session of the annual exhibition of Korean
Institute of Architects

The 15th Hongik Street art Exhibition 'High & Low' | Hongik University,   2007.9.12
Seoul, Korea
Installed temporary urban furniture. Collaborator: Jiyoon Gu, Yeonjoo Kang, Yoona Choi,
Minji Kim

**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

<u>**Skills**</u>
ArcGIS, QGIS, Rhinoceros, Grasshopper, Adobe Suite (Photoshop, Illustrator, Indesign, After Effect), HTML, CSS, R, D3, Javascript, Mapbox, Leaflet, Python, Arduino