

# Jihoon Chung

---

## CONTACT INFORMATION

Building Informatics Group  
Yonsei University  
Seoul, Korea

*Tel:* +82-10-8331-3573  
*E-mail:* j\_chung@yonsei.ac.kr

## RESEARCH INTERESTS

*Computational Design / Building Information Modeling / Machine Learning*  
digital fabrication, 3D concretet printing, printing simulation analysis, spatial network analysis, parametric design, interoperability, technical specification, deep learning, computer vision (object detection, facial recognition), natural language process (text classification)

## EDUCATION

**Yonsei University**, Seoul, Korea

M.S., Architectural Engineering, February 2021

- Thesis: “Technical Specification Framework for 3D Concrete Printers”
- Advisor: Dr. Ghang Lee

**Yonsei University**, Seoul, Korea

B.Arch, Architecture & Architectural Engineering (5-year program), February 2019

- Awarded four times of academic scholarship (AY2016–2018)

**National University of Singapore**, Singapore

Exchange Program for two semesters in AY2017

## RESEARCH & WORK EXPERIENCE

**Building Informatics Group, Yonsei University**

**February 2018 – Current**

*Research Assistant*

- Proposed a technical specification framework for 3D concrete printers through a systematic literature review and a Delphi study
- Developed a multi-dimensional classification algorithm for housing defesct text data using BERT-based multitask learning technique
- Explored optimization algorithm for buildability of 3D concrete printing focused on operation planning and concrete properties

**Yonsei University**, South Korea

**March 2019 – June 2020**

*Teaching Assistant*

- 'Engineering-Information Processing' in Semester 1, AY2020
- Computer lab manager in Semester 1, AY2019

**ATEAM Ventures**, South Korea

**May 2015 – August 2015**

*Strategic Planning staff*

- Planned strategies for marketing & sales and held a 3D-printer exhibition at KINTEX, Ilsan
- Installed a factory to assemble 3D-printers and managed mechanical components
- Managed all customer inquiries, wrote customer manuals, and sent thank-you letters to early customer

**XbarX (X\_X)**, South Korea

**May 2014 – February 2015**

*Sales Director & Co-founder*

- Launched Beer recommendation app and Beer-distribution platform
- Got partnership with 218 beer pub, bar, and restaurant in Seoul
- Got a shared 3rd award with a \$4,500 cash prize in 'The 3rd Chung Ju-young Start-up Competition' and funding, \$140,000 from a start-up accelerator

## PUBLICATIONS

(*Submitted*) **Chung, J.**, Lee, G., and Kim, J. (2021) " A Technical Specification Framework for 3D Concrete Printers: What Are the Technical Specification Items to 3D Concrete Printers as the CPU and Memory Size to Computers?" *Automation in Construction*

(*Submitted*) Woo, J., **Chung, J.**, and Koo, H. (2021) " A Study on the Pedestrian Route Choices and Accessibility in the Retail Areas after Acute COVID-19: Focused on the Peak Commercial Activity's Hours in the Mangwon District" *Journal of the Urban Design Institute of Korea*

**Chung, J.**, Lee, G., Kim, J. and Choi, J. (2020) "A Comparative Analysis of the Classification System for Three-Dimensional Concrete Printers" *Korean Journal of Construction Engineering and Management*, 21(2), 3-14., <https://doi.org/10.6106/KJCEM.2020.21.2.003>

**Chung, J.**, Lee, G., and Kim, J. (2020) "A Systematic Review of the Geographic and Chronological Distributions of 3D Concrete Printers from 1997 to 2020", *Proceedings of the 37th International Symposium on Automation and Robotics in Construction (ISARC)*, pp. 84-19, Kitakyushu, Japan, 27-28 Oct., <https://doi.org/10.22260/ISARC2020/0014>

Lee, G., Cho, J., Song, T., Roh, H., Jung, J., **Chung, J.**, Yong, G., and Jeong, D. (2020) "Construction Field Management Using a Popular Text Messenger" *Proceedings of the 18th International Conference on Computing in Civil and Building Engineering*, pp. 971-979, [https://doi.org/10.1007/978-3-030-51295-8\\_67](https://doi.org/10.1007/978-3-030-51295-8_67)

**Chung, J.**, Lee, G., and Kim, J. (2018), "Performance Evaluation Criteria for Building 3D Printing Focused on Concrete Properties", *Proceedings of the 2018 Annual Conference of the Korea Institute of Construction Engineering and Management*, pp. 27-29, South Korea, 9 Nov.

## HONORS & AWARDS

**2019 Yonsei Startup Lab Contest (\$2,700)**, Best Startup Award **July 2019**  
*Yonsei University, South Korea*

**2018 KICEM Annual Conference**, Excellent Paper Award **November 2018**  
*Korea Institute of Construction Engineering and Management, South Korea*

**Academic Sholarship** for four semesters **March 2016 – September 2018**  
*Yonsei University, South Korea*

**The 12<sup>th</sup> Architectural Engineering Competition (\$900)**, Excellent Award **September 2016**  
*The Korean Structural Engineers Association, South Korea*

**Volunteer Full-Scholarship** for two semesters **March & September 2016**  
*Dongbu Foundation, South Korea*

**The 3<sup>rd</sup> Chung Juyung Startup Competition (\$4,500)**, Excellent Startup Award **August 2014**  
*The Asan Nanum Foundation, South Korea*

**The 18<sup>th</sup> National Boxing Competition**, The 1<sup>st</sup> Prize **August 2012**  
*Korea Boxing Institution, South Korea*

## SKILLS

**Programming Languages:** Python, JAVA, C#, SQL, HTML, XML

**CAD/CAE:** Rhino(+Grasshopper), Revit, CATIA, AutoCAD, Sketchup

**Design tools:** Photoshop, Illustration, Indesign, Premiere Pro

**Machining:** 3D printer, Laser Cutter, Arduino

**Others:** SPSS, Tensorflow(+Keras), Pytorch, Protégé

LEADERSHIP  
EXPERIENCES

- Project leader**, Social Algorithm 7.0 Workshop **August 2020**
- Led a team project in an international online-workshop organized by Social Algorithm Research Group
  - Analyzed spatial network using Rhino + Grasshopper with Python, and conducted on-site surveys for the validation
  - Based on the analysis result, submitted a journal article to *Journal of the Urban Design Institute of Korea*
- Casting Director & Co-founder**, We Ask, Korea **January 2013 – September 2014**
- Co-founded a conference-planning organization called '젊음이 묻습니다', gathering 100+ NGO-interested students
  - Invited 30+ celebrities to have talks with students, such as Im Kwon-taek, Ko Un, Kim Jung-man, and so on
  - Got sponsorships from publishers, theatres, and student councils to implement marketing plans
- The 9<sup>th</sup> Chief Representative**, Global Intelligence, Korea **January 2012 – July 2013**
- Directed a volunteer group consisting of 69 college students to organize mentoring programs for teenagers

VOLUNTEER  
EXPERIENCE

- Major Mentoring Program** in Yonsei University, Korea **March 2019 – December 2020**  
*Architecture-Major Mentor*
- Architecture School** in Junglim Foundation, Korea **August 2018 – October 2018**  
*Architecture Tutor*
- Global Volunteering Program** in Dongbu Foundation, Vietnam **January 2017**  
*Student Volunteer*
- Student Volunteer Group** in Dongbu Foundation, Korea **February 2016 – February 2017**  
*Volunteer & Scholarship Holder*
- Global Engineering Program** in Yonsei University, Indonesia **August 2016**  
*Student Volunteer & Assistant Manager*
- Seoul Junghwa Secondary School**, Korea **September 2012 – December 2012**  
*Speech Tutor*
- Seoul Soongduk Primary School**, Korea **March 2012 – July 2013**  
*Speech Tutor*
- Kyoto International School**, Japan **August 2012**  
*Korean Tutor*

REFERENCES

- Ghang Lee**  
*Professor*  
Department of Architecture and  
Architectural Engineering  
Yonsei University  
*Tel:* +82-2-2123-5785  
*Email:* glee@yonsei.ac.kr  
<http://big.yonsei.ac.kr/>
- Jung-Hoon Kim**  
*Professor*  
School of Civil and  
Environmental Engineering  
Yonsei University  
*Tel:* +82-2-2123-5804  
*Email:* junghoon@yonsei.ac.kr  
<https://web.yonsei.ac.kr/coral>