Sungwook, Kim

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Personalities

- Thinking about 'WHY?'
- Interested in Solving Problems and Making Things Efficient.
- Excited to Imaginating and Visualizing something.

Education

Mar.2019 ~ Aug. 2021
(30 monthes)
	Hanyang University
	Undergraduate Course in Civil and Environmental Engineering
	  - GPA : 4.11/4.5 with 131 credits acquired.
	  - Completed Major Classes such as Construction Management, CAD for Construction, Building Information Modeling, Structural Analysis and so on.
	  - Completed Subjects such as Creative Programming for Engineers, Science Technologies for Sustainable Development, Basic Chinese and so on.
		Seoul, Korea

Mar.2014 ~ Feb. 2016
(24 monthes)
	Yonsei Univerity (Wonju Campus)
	Undergraduate Course in Physics
	  - GPA : 3.50/4.3 with 75 credits acquired.
	  - Completed Major Classes such as Basic Electromagnetics, Modern Physics, Statistics, Calculus and so on.
	  - Completed Subjects such as Leadership Development, Social Science and Social Welfare and so on.
	  - Completed 4th Semester on Feb. 2016 and Withdrawn on Sep. 2018
		Wonju, Gangwon-do, Korea

Experiences

Jul. 2023 - Jun. 2024 — **SSAFY (Samsung Software Academy For Youth)** — Seoul, Korea

<u>Student</u>
- 10th Generation Trainee of Embedded Track.
- Studied about Web Development such as HTML/CSS/JS, Vue.js, MySQL, Node.js, AWS.
- Studied about Embedded Development such as C/C++, Linux Programming, Shell, and Raspberry pi.
- Studied about Algorithm such as DFS/BFS, Dijkstra, Union-Find, MST, Dynamic Programming and so on.
- Developed Projects with React.js, Next.js, Unity Engine
- Studied about SCSS, Tailwind CSS, TypeScript

May. 2022 ~ Jun. 2022 — **42 SEOUL (La Piscine, Pre-Course)** — Seoul, Korea

<u>Pisciner</u> (A Trainee in Pre-Course)
- 2nd Piscine of 7th Generation.
- Studied about Basic of C, Shell, MacOS and Computer Science.
- Co-worked and solved problems with other pisciners.

Oct. 2021 ~ Nov. 2021 — **Platom Inc.** — Seoul, Korea

<u>Part Time Job Assistant</u>

Has participated in activities below.

Developing Project of A KMO Educational Application named MO.
- Writing a Flow Chart and Functional Specification.
- Coworking with developers and web designers.
- Making a Slogan for MO.
- Planning functions and image-maps in website and application.

Mar. 2020 ~ Sep. 2021 — **Intelligent Construction Technology Lab of Hanyang University (ICTLAB)** — Seoul, Korea

<u>Researching Assistant</u>

Has participated in activities below.

1. Researching project of Development of Smart Construction Technology hosted by ICT Center of Korea Expressway Corporation.
- Development of S-cop (Control Platform for Construction Equipments based on BIM-GIS) and C-Map (Big-Data Navigation for Construction equipments).
  - Construction equipment productivity analysis method using GPS Sensor.
  - Distingushing Behaviors of Construction Equipments by Time-Position data from GPS.
  - Calculating filling and Cutting of Earth-volume in 3d Voxels.
  - Making a Path Planning Logic with XYZ position data of 3d Voxels.
- Application Safety Management System with UWB Positioning System and Censors to S-cop with Kyungwoo Systec.
- Connecting with S-cop and Cloud E-BIM (A BIM Modeling Cloud Service) with DMCM.
  - Lightening and Simplifying of BIM data for Cloud Service.

2. Providing BIM Construction Services for E&C Companies.
- HDC, Incheon Yonghyun-Hakik re-development block (CITY-O-CIEL)
  - 3D BIM earthwork modeling of roads and blocks by using Autodesk Civil 3d.
  - Installing GCPs and Aerial Surveying by using surveying drone and lazer scanner.
  - Production of Orthomosaic, Digital survey report and Pointclouds by using Pix4D and CloudCompare.
  - Providing Aerial Photograph and Videos of Construction Site taken by surveying drone.
- Deukyoung E&C, International New City at Godeok, Pyeongtaek city.
  - Providing Maching Guidance 3d Models (MG) of roads for Construction Equipments such as excavators by using Autodesk Civil 3d.
  - Installation of Positioning System by GPS Sensors for Machine Guidance.
- Taeyoung E&C, Echo Delta City (EDC) in Busan.
  - Providing 3D BIM model of Bridge by using Autodesk Civil 3d and Autodesk Revit.
- HOBAN E&C - Reconstruction of Gaebong Residential Area 5
  - Installing GCPs and Aerial Surveying by using surveying drone.
  - Production of Orthomosaic and Pointclouds by using Pix4D and CloudCompare.

Projects

Hanyang University
- Analyzing Time and Position Data from GPS of Construction Equipments and Drawing a Graph of Probability Density Function about Behaviors of Equipments in Python and Excel.
- Designing Logic of Making route for Construction Equipments by GPS data and 3d Voxels.

WinAPI
- Making Crazy Arcade Game with C++/WinAPI
- Portfolio Video Link : https://youtu.be/EJj_PRnWfNE

SSAFY

Developing Auto-Follow-Driving-System with using Linux, Python, AWS IoT System, RC Car, Raspberrypi. (Group Project with 4 people.)
- MY Part : Developing Driving Control Part with using Python.
- PPT Presentation Link : https://github.com/WookeyKim95/RCCar_Following_Driving/blob/main/Embedded_RCCar_Project.pdf

Simulating Racing Game. (SSAFY RACE, Group Project with 3 people.)
- MY Part : Developing Driving Control and Avoiding Algorithm with using Python.
- Result : 1st Award on Speed Map and 2nd Award on SSAFY Map.

Developing Web Platform for Artists using Next.js. (Bon Voyage, Group Project with 6 people.)
- MY Part : Frontend Developer, Developing Login Session and so on.
- Github Repository Link : https://github.com/WookeyKim95/BonVoyage

Developing Cooking RPG and Tycoon Game using Unity Engine. (Michelin de Hanyang, Group Project with 6 people.)
- MY Part : Team Leader, Developing Game UI, Making UCC, Story, and Assets.
- Github Repository Link : https://github.com/WookeyKim95/Michelin-de-Hanyang

Developing Web Collabo-work Tool using React.js. (H-Up, Group Project with 6 people.)
- MY Part : Frontend Developer, Developing Real-time Co-editor.
- Project Notion Link : https://tropical-manicure-529.notion.site/ReadMe-6a17a851a3444c3988d1ebf3e4411d54

Club Activities

Sep. 2019 ~ Aug. 2021	IMS, Central Swimming Club of Hanyang University
	• A Member

Awards and Certifications

Aug. 2021	**Hanyang Award for Graduated with Summa cum laude**
	• Award for Students who graduated with GPA above 4.00
	• Graduation Ranking in department : 2
Apr. 2024	**Prize of Samsung SW Academy For Youth**
	• Metarverse Game Track
	• Specialization Project Second Prize (Michelin de Hanyang)

Lectures Completed

Jan. 2022	**Basic Web developing Course at FastCampus (K-Digital Credit)**
	• Studied about HTML/CSS/JavaScript
Sep. 2020	**Engineering Development Research Center (EDRC) of Seoul National University**
	• Digital Transformation for Leaders

Language and Other skills

• Languages	Native in Korean, Fluent in English
• Programming Languages	Python (Pandas, Matplotlib), C/C++ (WinAPI, Linux, Unreal Engine), JavaScript(Node.js, Vue.js, React.js, Next.js), C#(Unity Engine)
• Computer Programs	MS-Office(Word, Excel, Powerpoint), AutoCAD, Civil 3D, Pix4D, CloudCompare, Revit, Visual Studio, VSCode, Anaconda, Ubuntu, Vim
• Military Service	ROKAF (Republic Of Korea Air Force): Apr. 2016 – Apr. 2018
• Interests	3D Modeling, Programming, Algorithm
• Hobbies	Painting with a Tablet, Swimming