# 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

Seoul, Korea

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.

Mar.2014 ~ Feb. 2016 (24 monthes)

#### Yonsei Univerity (Wonju Campus)

Wonju, Gangwon-do, Korea

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  - Completed 4th Semester on Feb. 2016 and Withdrawn on Sep. 2018

## **Experiences**

Dec. 2024 - Present

## SSAFY (Samsung Software Academy For Youth), Multicampus

Seoul, Korea

Associate Software Engineer

- Worked in SSAFY Research Team
- Operating and Managing SSAFY GPT, a web platform for Prompt Sharing Service for ChatGPT
- Frontend with React.js, Typescript and Tailwind CSS
- Backend with Java, Spring Boot
- Fixed about 30 bugs and Refactored Code in Web Service and Chrome Extension
- Designed Service for Students to study how to use Generative AI and write prompts
- Commuticated with Students to upgrade curriculum and programs

Jul. 2023 - Jun. 2024

## (12 monthes)

## 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 (4 weeks)

### 42 SEOUL (La Piscine, Pre-Course)

Seoul, Korea

- Pisciner (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.

Mar. 2020 ~ Sep. 2021 (19 monthes)

## Intelligent Construction Technology Lab of Hanyang University (ICTLAB)

Seoul, Korea

## Researching Assistant

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.
- $\bullet \ \, \text{Distingushing Behaviors of Construction Equipments by Time-Position data from GPS.}$
- 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.
- $\bullet$  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.
- $\bullet$  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-6a17a851a3444c3988dlebf3e44lld54

## Club Activities

Sep. 2019 ~ Aug. 2021

#### IMS, Central Swimming Club of Hanyang University

A Member

# Awards and Certifications

Hanyang Award for Graduated with Summa cum laude

Award for Students who graduated with GPA above 4.00

• Graduation Ranking in department: 2

Award of Samsung SW Academy For Youth

Apr. 2024 • Metarverse Game Track

• Specialization Project Second Prize (Michelin de Hanyang)

Award by Vice Chairman of Samsung Electronics Co.

• Achievement Award for Representative of SSAFY Seoul Campus

• Autonomous activities such as Communication with Operation Office of SSAFY, Elevator Campaign, and so on.

# Language and Other skills

• Languages

Aug. 2021

Jun. 2024

Native in Korean, Fluent in English

Programming Languages Computer Programs

Python (Pandas, Matplotlib), C/C++ (WinAPI, Linux, Unreal Engine), JavaScript(Node.js, Vue.js, React.js, Next.js), C#(Unity Engine) MS-Office(Word, Excel, Powerpoint), AutoCAD, Civil 3D, Pix4D, CloudCompare, Revit, Visual Studio, VSCode, Anaconda, Ubuntu, Vim ROKAF (Republic Of Korea Air Force): Apr. 2016 – Apr. 2018

Military Service
 Interests
 Hobbies
 ROKAF (Republic Of Korea Air Force): A 3D Modeling, Programming, Algorithm
 Painting with a Tablet, Swimming