SANGWAN KIM

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EDUCATION

Sungkyunkwan University (SKKU), Bachelor of Engineering 2016–2022

Double major in Civil Engineering and Mechanical Engineering | Seoul, South Korea

- GPA: 4.03/4.50 overall (95.3/100); Civil Engineering 4.15/4.50; Mechanical Engineering 4.16/4.50.
- **Graduated summa cum laude (Highest Honors), 2022.**

RESEARCH INTERESTS

How can AI agents study people faithfully: asking from what people actually do, and knowing when a simulated person can stand in for a real one?

- **AI interviewers grounded in behavior.** Follow-up questions built from what a person just did, not only from what they report; when to step in, and how to ask without leading (Usercase).
- **Simulating people with agents.** Agents built from a person's own interview; measuring where they answer like the real person and where they drift (Dalm, willu).
- **Where it started: sensing the physical world.** Comparing design with as-built structures through vision, 3D scans and AR: measuring the gap between a model and reality, and reporting its error honestly.

Keywords: Human–AI Interaction · AI-moderated interviews · Generative agents · Simulations of people · Behavioral data vs. self-report · Human-in-the-loop systems · Spatial computing · Civil × Mechanical × AI

PROFESSIONAL AND ENGINEERING EXPERIENCE

EarningBirds Inc. (Usercase) | Founder & CEO Sep 2025–Present

U.S.-incorporated AI user research SaaS | Founder-led product engineering, enterprise discovery, and team leadership

- **Product Ownership & Team Leadership.** Founded the company and led a cross-functional team of up to five; owned product direction, user research, UX/UI design, hands-on implementation, U.S. corporate operations, and enterprise customer development.
- **Platform Engineering.** Co-architected and built an AI-powered user research SaaS platform with an embeddable web SDK and Chrome extension; shipped behavioral event capture, session replay, heatmaps, journey analytics, and privacy-oriented PII masking.
- **Behavior-Triggered Research.** Designed rules to detect usability-friction signals—including rage clicks, dead clicks, inactivity, and rapid backtracking—and initiate contextual, AI-moderated interviews within live product experiences.
- **Task-Aware Evaluation.** Built research workflows with configurable task objectives, completion conditions, ideal and alternative paths, and event-linked session replay; combined observed task performance with user responses to examine different ways of achieving the same goal.
- **AI Planning & Data Integration.** Connected external product analytics and business data via APIs, including Amplitude and Google Analytics, to support natural-language analysis; co-designed research planning that combines business objectives, product context, and behavioral signals, with human review and editable approval before execution.
- **Research Validity & Moderator Design.** Observed cases in which users reported difficulty despite successful task completion; revised the AI moderator to use neutral questions, behavior-grounded probes, and adaptive follow-ups rather than treating self-reports or the intended user path as definitive evidence.
- **Live-Product Usability Study.** Conducted an AI-moderated three-step usability study with 50 actual users of a seller-administration product. Forty-eight completed the target task, including direct, alternative, and unexpected routes; combined interview and behavioral findings to support retaining a newly introduced filter feature.

- **Operational Results.** Completed participant interviews, analysis, and reporting for the 50-user study within one day, compared with an approximately two-week conventional research workflow; supported roughly 1,200 pilot/test sessions across external evaluation activities.
- **Enterprise Discovery & Validation.** Conducted more than 100 customer-discovery interviews and developed four design-partner relationships; participated in early product evaluations involving researchers at Lucid Software and JPMorgan, with additional exploratory research discussions involving professionals at Microsoft and Amazon Business Spain.
- **Commercial Exploration.** Identified approximately $71,000 in nonbinding prospective purchase interest through enterprise research and procurement discussions.

ACADEMIC RESEARCH EXPERIENCE

Structural Health Monitoring Laboratory, Sungkyunkwan University 2020–2022

Undergraduate Researcher | Advisor: Prof. Sung Han Sim | Smart construction and engineering systems

Image-Based Structural Crack Detection | *Computer Vision & Quantitative Evaluation*

- Built MATLAB-based pipelines using image preprocessing, edge detection, filtering, and adaptive thresholding to isolate candidate cracks in building imagery under varying acquisition and surface conditions.
- Compared detection outputs quantitatively across multiple image conditions and adjusted shared processing parameters for more consistent behavior, rather than optimizing separately for isolated examples.
- Explored 3D point-cloud depth information for crack characterization; found practical limits in distinguishing fine cracks from surface-geometry measurements, motivating clearer separation of what each sensing modality could resolve.

AR Construction Guidance | *3D Scanning, Geometric Reconstruction & Spatial Computing*

- Captured full-scale precast-concrete slab geometry using 3D scanning; transformed point-cloud data into mesh representations and examined as-built differences from nominal design geometry.
- Independently modeled structural components in Blender and developed a Unity application for Microsoft HoloLens to overlay installation targets in physical space, using marker-based initial registration and headset spatial tracking.
- Tested tracking during user movement: visualization and placement overlays worked, while spatial drift limited suitability for precision-critical placement; identified training and spatial instruction as more feasible application directions.

Numerical–Physical Hybrid Simulation | *Experimental Systems & Research Reproduction*

- Reproduced a single-axis hybrid-simulation testbed from prior academic research, selecting and assembling components and control circuitry for a computer-connected physical experiment.
- Integrated Arduino-controlled stepper-motor actuation and LabVIEW with a numerical simulation environment; achieved coupled computer–hardware operation and conducted experimental runs.

SELECTED TECHNICAL VENTURES

Independent and collaborative ventures undertaken after graduation (2022–2024).

Blueroom | *Founder | VR/NFT Application*

- Built and shipped an Oculus Quest VR app for using digital collectibles in virtual spaces; ran a closed beta with about 50 users and learned that headset comfort and content depth limited sustained use.

On-Chain Arbitrage | *Co-Developer & Strategy Lead | Automated Trading*

- Co-developed and operated an automated cross-DEX trading system (about $38,000 net from $7,500); identified execution latency as the binding constraint and worked with the CTO on infrastructure.

Bluetags | *Founder* | *Web3 Information Aggregation*

- Built a product that consolidated fragmented Web3 updates from X, Discord and other channels; seeded through a community channel and reached thousands of users.

RECENT AI WORK (2026)

Built with AI coding agents alongside Usercase; each project tests a question about people and AI agents.

- **willu (willu.me).** Interview-built AI twins go on simulated dates. Finding: when one model wrote both people, simulations barely separated good from poor pairs (55% vs. 49%), motivating independent agents per person.
- **Dalm.** Korean adaptation of Stanford's generative-agent interviews; long interviews stayed on protocol only when the script lived in code and the model chose follow-ups.

HONORS, AWARDS AND SCHOLARSHIPS

Presidential Scholarship, Korea Student Aid Foundation (KOSAF) 2020–2021

Outstanding Startup Award, KOSME Youth Startup Academy 2022

Commendation from the Mayor of Suwon, Urban Regeneration Startup Project 2021

Dean's List, Sungkyunkwan University 2020

Highest Honor Merit Scholarship, Sungkyunkwan University 2019

SELECTED ENTREPRENEURSHIP PROGRAMS AND LEADERSHIP

500 Global Founders Retreat 2025

Selected for 500 Global's founder-development retreat and international startup-networking program in the U.S.; a program, not an investment.

Smilegate Orange Planet 2024

Selected for incubation, workspace, and U.S. market-entry support.

KODIT Start-up NEST, 16th Cohort 2024

Selected to the Korea Credit Guarantee Fund startup acceleration program.

KOSME Youth Startup Academy, 12th Cohort 2022

Selected founder and class representative; received approximately $60,000 in startup-program support.

TECHNICAL SKILLS

Programming: TypeScript, JavaScript (primary); Python, MATLAB, C# (project-based)

AI, Data & Web Systems: LLM-moderated interviewing, contextual prompting and orchestration, human-in-the-loop research workflows, API integration, natural-language data analysis, event instrumentation, embeddable web SDKs, browser extensions, session analytics

Computer Vision & Spatial Computing: Image preprocessing and filtering, edge detection, adaptive thresholding, point-cloud processing, mesh reconstruction, Blender, Unity, Microsoft HoloLens

Experimental Engineering & Design: Arduino, LabVIEW, stepper-motor control, structural simulation, Autodesk Inventor, MSC Patran/Nastran, Figma