YEONGJE KIM

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Automotive Validation & Data Analysis candidate with end-to-end Hyundai Motor Group project experience.
Specialized in experiment design, real-vehicle testing, sensor-data validation, root-cause diagnosis, and technical reporting.

EDUCATION

Kookmin University — Seoul, South Korea Expected Graduation: Feb. 2028
B.S. in Automobile and IT Convergence | GPA: 4.19 / 4.50

EXPERIENCE

Humans and Vehicle Automation Lab (HuVA Lab) Apr. 2025 – Mar. 2026
Undergraduate Researcher — Hyundai Motor Group Smart Seat Evaluation

- Executed end-to-end Genesis G90 smart seat evaluation from setup and testing to data analysis and reporting.
- Collected and validated 65+ hours of multi-channel data from 12 participants during 2-hour real-vehicle driving tests.
- Analyzed driver comfort trends using seat pressure, air-cell control, comfort survey, seat position, and driver video data.
- Diagnosed a data-logging failure during air-cell exhaust events by comparing live vehicle logs with Excel timestamps and identifying repeated last-value entries.

HuVA Lab — Autonomous Vehicle Disengagement Analysis Sep. 2025 – Mar. 2026
Undergraduate Researcher — Vehicle Data Analysis & Publication

- Built and standardized a 10-year California DMV AV disengagement dataset covering 222,537 cases across 54 manufacturers using Tabula, Camelot, and Excel VBA.
- Developed a root-cause framework classifying disengagement narratives into driver, system, and environment factors.
- Analyzed longitudinal disengagement trends, resulting in a first-author paper accepted by the KSAE Korean Automotive Journal.

PROJECTS

IONIQ5 EV Eco-Mode Simulation Sep. – Oct. 2025
KETEP 2025 EV Competition — Team Lead

- Developed a physics-based IONIQ5 EV model with aerodynamic drag, rolling resistance, and regenerative braking.
- Evaluated torque-control strategies that achieved up to 6.43% energy savings under WLTP driving conditions.

In-Vehicle IoT Data Visualization Device Mar. 2026 – Present
Global PBL Program — Team Lead

- Built an ESP32-S3 OBD-II prototype displaying speed-reactive animations on a TFT display.
- Validated live OBD-II speed data on a Hyundai Elantra and identified EV data-access limitations through Rivian testing.

SKILLS

Testing & Validation: Real-vehicle testing, sensor validation, data logging, root-cause analysis, statistical analysis
Programming & Data Analysis: Python, MATLAB, Excel VBA, C, C++
Simulation: MORAI, SCANeR Studio, Simulink
Collaboration: Git, Jira, Notion

AWARDS & CERTIFICATIONS

- **Excellence Award**, Mechanical Engineering Design Competition — Kookmin University (Dec. 2022)
- **ADsP**, Advanced Data Analytics Semi-Professional — Korea Data Agency (Mar. 2026)