CHIWOO ROH

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EDUCATION

Sep. 2023 ~ Present	**Ajou University** Department of Data/Network/AI Convergence (Transportation Engineering Program) *Master's degree Student* Advisor: Dr. Jaehyun So	Suwon, Korea
Mar. 2018 ~ Aug. 2023	**Ajou University** Department of Transportation Systems Engineering *Bachelor of Transportation Systems Engineering*	Suwon, Korea

PUBLICATION

International Journal

Domestic Journal

1. Hoyeon Kim, Jaeseok Kim, Sangsoo Lee and **Chiwoo Roh**. (2024). Analysis of Automation Level Characteristics of Autonomous Driving Simulation Research. The Journal of The Korean Society of Intelligent Transport Systems, 23(6), 366-381.
2. Sungeun Cho, **Chiwoo Roh**, Sungmin You and Jaehyun So. (2024). Comparative Analysis of the 3D Object Detection Performance of LiDAR Sensors for Traffic Monitoring. International journal of highway engineering, 26(5), 143-150.

International Conference Proceedings

1. Younghoon Seo, Jihyeok Park, Gyungtaek Oh, Hyungjoo Kim, **Chiwoo Roh**, Jia Hu and Jaehyun So. Extracting Traffic Crash Information from Imbalanced-Unstructured Traffic Crash Description Texts Using a Text Classification Modeling Technique. In TRB 103rd Annual Meeting. The National Academies of Sciences, 2024

Domestic Conference Proceedings

1. **Chiwoo Roh**, Eugene Lee and Jaehyun So. Personality on the Road : Driving Behavior Analysis and Trajectory Generation with LLMs. In 2025 Korean Society of Transportation Spring Conference. The Korean Society of Transportation, 2025 **(Academic Award for the best paper)**
2. Sungeun Cho, **Chiwoo Roh**, Sungmin You and Jaehyun So. A Proof-of-Concept Study for LiDAR-Based Traffic Measure Estimation: Traffic Density Estimation and Vehicle Trajectory Extraction. In 2025 Korean Society of Transportation Spring Conference. The Korean Society of Transportation, 2025
3. Sungmin You, Haneul Park, **Chiwoo Roh**, Sungeun Cho and Jaehyun So. Enhancing Traffic Safety through Predicting Child Pedestrian Trajectories: A Study Using Transformer-Based Deep Learning Approach. In 2024 Korean Society of Transportation Fall Conference. The Korean Society of Transportation, 2024
4. Eugene Lee, Juyeong Kim, **Chiwoo Roh** and Jaehyun So. Vehicle Cooperation versus Competition under Automated Driving Conditions. In 2023 Korean Society of ITS Fall Conference. The Korean Society of Intelligent Transport Systems, 2023

5. **Chiwoo Roh**, Eugene Lee and Jaehyun So. A Study on Evaluation of Autonomous Vehicle Legal Compliance Using Traffic Simulation. In 2023 Korean Society of ITS Fall Conference. The Korean Society of Intelligent Transport Systems, 2023
6. **Chiwoo Roh**, Eugene Lee and Jaehyun So. A Study on Evaluation Indicators for Compliance with Autonomous Vehicle Legislation: Focusing on the Speed Limit Adherence Indicator. In Joint Conference of Korean Society of Transportation & Korea Planning Association. The Korean Society of Transportation, 2023
7. **Chiwoo Roh**, Eugene Lee and Jaehyun So. Development of Self-driving Vehicle Evaluation Interface Using Traffic Simulation. In 2023 Korean Society of ITS Spring Conference. The Korean Society of Intelligent Transport Systems, 2023

DOMESTIC PATENT

Method and Apparatus for Regulatory Adaption of Autonomous Driving Logic

- ✓ Applicant: Ajou University
- ✓ Inventor: Jaehyun So, **Chiwoo Roh**, Eugene Lee
- ✓ Country: South Korea
- ✓ Status: Applicant(10-2024-0187517)

Autonomous Vehicle Logic Generation Device and Method for Traffic Simulation

- ✓ Applicant: Ajou University
- ✓ Inventor: Jaehyun So, **Chiwoo Roh**, Eugene Lee
- ✓ Country: South Korea
- ✓ Status: Applicant(10-2023-0163241)

RESEARCH EXPERIENCES

Visiting Student at *Texas A&M University* Jan. 2024 ~ Feb. 2024

- ✓ Korea-US NSF IRES : AIxMobility

Research Intern at *Movelab, Ajou University* Jan. 2023 ~ Aug. 2023

- ✓ Evaluation of Autonomous Vehicle Legal Compliance Using Traffic Simulation

TEACHING EXPERIENCES

Teaching Assistant

1. **Mobility Data Analytics [E091]**, Ajou University 2024
2. **Highway Capacity Analysis [E092]**, Ajou University 2024
3. **Mobility Seminar I [O1391]**, Ajou University 2024
4. **Unstructured Data Analysis Theory and Practice**, Hyundai NGV 2023~2024
5. **Smart Mobility Service [E046]**, Ajou University 2023
6. **Traffic Study and Data Analytics [E051]**, Ajou University 2023

PROJECTS

Developing Hazardous Driving Indicators and Determination Algorithm Based on Big Data Technology

- ✓ Funder : Hyundai Motor Company
- ✓ Program : Hyundai Motor Company Industry-University Cooperation Program
- ✓ Project year : 2024. 6. 15 ~ 2025. 6. 14
- ✓ Funding : 100 million KRW
- ✓ Role : Research Assistants

Graduate Program for Convergence Technology of Data/Network/AI and Road Transport

- ✓ Funder : Ministry of Land Infrastructure and Transport
- ✓ Program : Graduate Program for Convergence Technology of Data/Network/AI
- ✓ Project year : 2022. 5. 1 ~ 2027. 12. 31
- ✓ Funding : 6,140 million KRW
- ✓ Role : Research Assistants

Development of Technology for Validating the Autonomous Driving Services in Perspective of Laws and Regulations

- ✓ Funder: Ministry of Science and ICT
- ✓ Program : Korea Autonomous driving Development Innovation Project
- ✓ Project year : 2021. 4. 1 ~ 2024. 12. 31
- ✓ Funding : 4,100 million KRW
- ✓ Role : Research Assistants

Research to improve mechanical parking lot legislation

- ✓ Funder: Korea Transportation Safety Authority
- ✓ Project year : 2023. 3. 30 ~ 2023. 12. 25
- ✓ Funding : 39 million KRW
- ✓ Role : Research Assistants