

# CHIWOO ROH

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## EDUCATION

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

## PUBLICATION

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### International Journal

#### Domestic Journal

1. 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. Eugene Lee, Juyeong Kim, **Chiwoo Roh** and Jaehyun So. Cooperation and Competition Among Vehicles in Automomous Driving merge scenario - A Proof-of-Concept Study. In 2024 Korean Society of ITS Fall Conference. The Korean Society of Intelligent Transport Systems, 2024
2. 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
3. **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
4. **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

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### 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

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### Visiting Researcher 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

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### Teaching Assistant

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

## PROJECTS

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### 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