

# DONGSU LEE

✉ dongsu.lee@utexas.edu    ☎ +82-10-4994-1900    🌐 <https://dongsuleetech.github.io/>

## EDUCATION & AFFILIATION

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### University of Texas at Austin

Ph.D. student in Department of Electrical and Computer Engineering  
Adviser: Prof. Amy Zhang

Austin, TX  
Aug. 2025 - Present

### Carnegie Mellon University

Collaborative Researcher in Safe AI Lab  
Adviser: Prof. Ding Zhao

Pittsburgh, PA  
(Remote) Mar. 2025 - Jun. 2025

### Carnegie Mellon University

Visiting student in School of Computer Science  
Adviser: Prof. Ding Zhao

Pittsburgh, PA  
Aug. 2024 - Feb. 2025

### Soongsil University

M.S. (coursework completed; degree not awarded) in Department of Intelligent Semi-conductor  
Adviser: Prof. Minhae Kwon

Seoul, Korea  
Mar. 2022 - Feb. 2025

### Soongsil University




B.S., Bio-medical System; Big-data Computing  
GPA: 4.22 (Major: 4.22) /4.5 (**summa cum laude**)  
Leave of absence for military service: Aug 2017 - May 2019 (2 years)

Seoul, Korea  
Mar. 2016 - Feb. 2022






## SELECTED PUBLICATIONS ([GOOGLE SCHOLAR](#))

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### Conferences

1. **Dongsu Lee**, Minhae Kwon  
*Temporal Distance-aware Transition Augmentation for Offline Model-based Reinforcement Learning*  
ICML, July 2025 
2. **Dongsu Lee**, Minhae Kwon  
*Episodic Future Thinking Mechanism for Multi-agent Reinforcement Learning*  
NeurIPS, December 2024 
3. **Dongsu Lee**, Chanin Eom, Minhae Kwon  
*AD4RL: Autonomous Driving Benchmarks for Offline Reinforcement Learning with Value-based Dataset*  
ICRA, May 2024 

### Journals

1. **Dongsu Lee**, Minhae Kwon  
*Scenario-free Autonomous Driving with Multi-task Offline-to-online Reinforcement Learning*  
IEEE Transactions on Intelligent Transportation Systems, 2025. 
2. **Dongsu Lee**, Minhae Kwon  
*Offline Reinforcement Learning on Foresighted Decision-making for Autonomous Driving System*  
IEEE Internet of Things Journal, vol.12, no.19, 2025. 
3. **Dongsu Lee**, Minhae Kwon  
*Instant Inverse Modeling of Stochastic Driving Behavior with Deep Reinforcement Learning*  
IEEE Transaction on Consumer Electronics, September 2024 
4. **Dongsu Lee**, Minhae Kwon  
*Stability Analysis in Mixed-Autonomous Traffic with Deep Reinforcement Learning*  
IEEE Transactions on Vehicular Technology, vol 72, no. 3, March 2023  
NeurIPS 2021 Deep Reinforcement Learning Workshop 
5. **Dongsu Lee**, Minhae Kwon  
*ADAS-RL: Safety Learning Approach for Stable Autonomous Driving*  
ICT Express, vol.8, no.3, September 2022 

### Under Review

1. **Dongsu Lee**, Daehee Lee, Yaru Niu, Hongguk Wu, Amy Zhang, Ding Zhao  
*Multi-agent Reinforcement Learning, Representation Learning*  
NeurIPS 2025
2. Daehee Lee, TaeYoon Kwack, **Dongsu Lee**, Wonje Choi, Hongguk Wu  
*Skill Incremental Learning*  
NeurIPS 2025
3. **Dongsu Lee**, Yaru Niu, Yongkang Liu, Ding Zhao  
*Multi-agent Reinforcement Learning*  
ICRA 2025

## PATENTS

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### Issued US Patents

1. **Dongsu Lee**, Minhae Kwon, “Apparatus and Method for Inferring Driving Characteristics of Vehicle,” US Patent, Oct 4, 2022. (Application no. US 17/959515), issued on June X, 2025. (Patent no. US X)
2. **Dongsu Lee**, Minhae Kwon, “Method for Combating Stop-and-Go Wave Problem Using Deep Reinforcement Learning based Autonomous Vehicles, Recording medium and device for performing this the method,” US Patent, Nov 27, 2021. (Application no. US 17/535567), issued on September 17, 2024. (Patent no. US 12,091,025)

### Issued KR Patents

1. **Dongsu Lee**, Minhae Kwon, “Apparatus and Method for Inferring Driving Characteristics of A Vehicle,” KR Patent, filed on June 16, 2022 (Application no. 10-2022-0073198), issued on March 28, 2025 (Patent no. 10-2790273).
2. **Dongsu Lee**, Minhae Kwon, “Method of Lane Change for Autonomous Vehicles Based Deep Reinforcement Learning, Recording Medium and Device for Performing the Method,” KR Patent, filed on Sep 06, 2021 (Application no. 10-2021-0118540), issued on January 25, 2024 (Patent no. 10-2631402).
3. **Dongsu Lee**, Minhae Kwon, “Method for Combating Stop-and-Go Wave Problem Using Deep Reinforcement Learning-Based Autonomous Vehicles, Recording Medium, and Device for Performing the Method,” KR Patent, filed on July 13, 2021 (Application no. 10-2021-0091665), issued on October 19, 2022. (Patent no. 10-2457914)

## HONORS AND AWARDS

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### Scholarships

- **UT Austin Engineering Fellowship (USD 6000 / year)** Aug 2025 - Present  
Cockrell School of Engineering and The University of Texas at Austin Graduate School
- **Hyundai Future Industrial Talent Scholarship (Tuition + KRW 3,600K/year)** Aug 2023 - Feb 2025  
Hyundai Motor Chung Mong-Koo Foundation  
Full tuition, insurance, and living expenses support for graduate studies
- **Soongsil Graduate Admission Excellence Scholarship (Tuition)** 2022
- **Yesan Fellowship Local Talent Scholarship (KRW 2,000K)** 2021
- **Soongsil Academic Excellence Scholarship (Tuition)** 2016, 2019, 2020

### Awards

- **Global Excellence Scholarship (Prize: KRW 3,000K; three times)** 2024  
Hyundai Motor Chung Mong-Koo Foundation
- **Best Journal Paper Award** 2023, 2024  
Korean Institute of Communications and Information Science
- **ICT Challenge IITP President’s Award (Prize: KRW 5,000K)** 2023  
Ministry of Science and ICT and Institute for Information & communication Technology Planning & evaluation
- **Haedong Best Paper Award** 2023, 2024  
Korean Institute of Communications and Information Science

- **Best Paper Award** 2022, 2024  
Korean Institute of Communications and Information Science
- **ICT Idea Competition Award** 2021  
Korean Institute of Communications and Information Science

## Grants

- **NeurIPS Travel Grants, Vancouver, Canada** 2024  
Neural Information Processing Foundation  
Full conference registration and accommodation support
- **AI Intensive Program at Carnegie Mellon University, Pittsburgh, PA (USD 41,000)** 2024 - 2025  
IITP & Sogang University
- **ICRA Travel Grants, Yokohama, Japan (USD 2,500)** 2024  
IEEE Robotics and Automation Society
- **18th Qualcomm IT Tour, San Diego, CA** 2022  
Qualcomm Incorporation  
Full support including flight, accommodation, and living expenses
- **Upper Bound: AI Conference, Edmonton, Canada (USD 2,200)** 2022, 2024  
Alberta Machine Intelligence Institution (AMII)
- **Conference Financial Assistance, Virtual** 2021  
Neural Information Processing Systems (NeurIPS)

## EXPERIENCES

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### Professional Experiences

- **ICML Theory of Mind Workshop** (Program Committee) Jul 2023
- **EIRIC Rising Researcher Seminar** (Presenter) Electronic & Information Research Information Center Jun 2023
- **R&D Promising Technology Showcase** (Presenter) Korea evaluation institute of industrial technology May 2023

### Teaching Assistance

- **Multi-media Converging Technology**, Soongsil University 2023 Spring
- **Programming and Practice**, Soongsil University 2021 Autumn

### Reviews

- **Journal:** Nature Communication (2025), IEEE TCYB (2025), IEEE TITS (2025), IEEE TCE (2025), IEEE IoTJ (2023), IEEE TVT (2023)
- **Conference:** IEEE IV (2025), ICRA (2025), IROS (2025), CoRL (2025), NeurIPS (2025), ICML (2022)
- **Workshop:** ICML ToM (2023), NeurIPS ML4AD (2022)