

Seokbin Yoon

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| EDUCATION | <div><div>M.S. Smart Air Mobility & Air Transportation, Korea Aerospace University</div><div>Feb 2024</div></div> <div><ul style="list-style-type: none">• Grade: 4.0/4.5 (3.79/4.0)• Thesis: Trajectory Reconstruction and Prediction for Vectored Area Navigation Arrivals, Supervised by Dr. Keumjin Lee</div> <div><div>B.S. Air Transportation, Korea Aerospace University</div><div>Feb 2022</div></div> <div><ul style="list-style-type: none">• Grade: 3.94/4.5 (3.71/4.0)</div> |
| RESEARCH INTERESTS | <div><ul style="list-style-type: none">• Air Traffic Control & Advanced Air Mobility• Deep Learning & Generative Models• Autonomous & Safety-Critical Systems</div> |
| PROFESSIONAL EXPERIENCE | <div><div>Researcher, Aviation Industry Policy Research Institute, South Korea</div><div>Feb 2024–Present</div></div> <div><ul style="list-style-type: none">• Developing human-interpretable multi-agent flight trajectory model• Developing automatic air traffic control speech recognition model with synthetic speech data• Working on air traffic complexity inference with computer vision method</div> |
| PUBLICATIONS & PROCEEDINGS | <div><div>[1] Seokbin Yoon, K. Lee, “Generative Multi-Agent Flight Trajectory Prediction via Conditional Flow Matching,” In preparation.</div><div>[2] K. Kim, Seokbin Yoon, K. Lee, “Probabilistic Multi-Agent Aircraft Landing Time Prediction,” AIAA SciTech, Accepted, 2026.</div><div>[3] Seokbin Yoon, K. Lee, “Multi-Agent Inverted Transformer for Flight Trajectory Prediction,” IEEE Transactions on Intelligent Transportation Systems, Under First Revision, available at [link].</div><div>[4] Seokbin Yoon, K. Lee, “Aircraft Trajectory Dataset Augmentation in Latent Space,” International Journal of Aeronautical & Space Sciences, available at [link].</div><div>[5] Seokbin Yoon, K. Lee, “Aircraft Trajectory Prediction with Inverted Transformer,” IEEE Access, available at [link].</div><div>[6] H. Chai, Seokbin Yoon, K. Lee, “Learning to Explain Air Traffic Situation,” US-Europe Air Transportation Research & Development Symposium (ATM Seminar & ICRAT), 2025, available at [link].</div><div>[7] J. Kang, Seokbin Yoon, K. Lee, SH. Kim, “Urban Air Mobility Fleet Rebalancing with Real-Time Updates on Estimated Time of Arrival,” AIAA/IEEE Digital Avionics System Conference (DASC), 2024, available at [link] (Best Paper of the Session).</div><div>[8] Seokbin Yoon, K. Lee, “Improving Aircraft Trajectory Prediction Accuracy with Over-sampling Technique,” AIAA/IEEE Digital Avionics System Conference (DASC), 2023, available at [link].</div><div>[9] NH. Gray, S. Shin, Seokbin Yoon, Y. Park, H. Chai, K. Lee, H. Kim, S. Jung, “Safety and Capacity Analysis Framework for Integrated UAM Operation in Airports,” AIAA/IEEE Digital Avionics System Conference (DASC), 2023, available at [link] (Best Paper of the Session).</div></div> |
| HONORS AND AWARDS | <div><div>Best Paper of the Session at AIAA/IEEE Digital Avionics System Conference 2024</div><div>Dec 2024</div></div> <div><div>President’s Award at Korea Aerospace University</div><div>Sep 2023</div></div> <div><div>Best Paper of the Session at AIAA/IEEE Digital Avionics System Conference 2023</div><div>Oct 2023</div></div> <div><div>Brain Korea 21 Plus (BK21+) Research Scholarship at Korean Government</div><div>Jun 2022–Jun 2023</div></div> |
| CERTIFICATIONS AND LICENSES | <div><div>Air Traffic Controller License, Ministry Land, Infrastructure and Transport, South Korea</div><div>Oct 2023</div></div> |

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| ACTIVITIES | Student Air Traffic Controller , Korea Aerospace University | Feb 2021–Feb 2022 |
| | <ul style="list-style-type: none">• Learned the air traffic control process of terminal and sector airspace (1 year)• Field ATC training at Jungseok Airfield (Korean Air), South Korea (1 month) | |
| | Academic Club President , Korea Aerospace University | Jun 2021–Dec 2021 |
| | <ul style="list-style-type: none">• Led the academic club about Urban Air Mobility (UAM)• Participated undergraduate research competition | |
| COMPETENCES | Programming Languages: Python, MATLAB, \LaTeX Software Libraries: PyTorch | |
| REFERENCES | Keumjin Lee , Professor | |
| | Department of Air Transport, Transportation, and Logistics, Korea Aerospace University keumjin.lee@kau.ac.kr | |
| | Sang Hyun Kim , Associate Professor | |
| | Department of Air Transport, Transportation, and Logistics, Korea Aerospace University sanghyun@kau.ac.kr | |
| | Hojong Baik , Professor | |
| | Department of Air Transport, Transportation, and Logistics, Korea Aerospace University hbaik@kau.ac.kr | |
| | Jay Hoon Jung , Assistant Professor | |
| | Department of Artificial Intelligence, Korea Aerospace University jhjung@kau.ac.kr | |