

Jiayu Liu

3127 Courthouse Dr W, Apt 3A, West Lafayette, IN | +1 765-775-7714 | liu3309@purdue.edu

EDUCATION

Purdue University

Ph.D. in Technology, Advisor: Dr. Yi Gao

M.S. in Applied Statistics

M.S. in Aviation and Aerospace Management

Graduate Certificate in Geospatial Information Science (GIS)

Graduate Certificate in Applied Statistics

West Lafayette, IN, USA

2023-2027 (Expected)

2025-2026 (Expected)

2021-2023

2024

2024

Beijing Jiaotong University

B.E. in Traffic and Transportation (Civil Aviation Transportation)

Beijing, China

2017-2021

SKILLS

- ✧ Statistical Programming/Markup Languages: R, Python, SAS, SPSS, LATEX
- ✧ Languages: Mandarin (Native), English
- ✧ Applications: Microsoft Office, Tableau, ArcGIS Pro, AutoCAD, VOSviewer, Adobe Creative Suite, Premiere Pro
- ✧ Music: Violin Performing and Teaching, Piano, Orchestra Performing

CERCIFICATION & LICENSE

- ✧ SAS Certified Specialist: Base Programming Using SAS 9.4

PEER-REVIEWED PUBLICATIONS

- ✧ Liu, J., Beck, C. S., & Gao, Y. (2024). Can you judge a book by its cover? An analysis of travelers' perceptions of airline logos and airlines' business models. *Journal of Air Transport Management*, 115, 102543. <https://doi.org/10.1016/j.jairtraman.2024.102543>
- ✧ Gao, Y & Liu, J. (2023). *State of Airport Loyalty Programs (ACRP Synthesis 131)*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27279>.
- ✧ Wang, S., Dou, Z., Liu, J., & Gao, Y. (2025). The fate of Akron-Canton Regional Airport following the dehubbing of Cleveland Hopkins International Airport and exodus of Southwest Airlines. *Case Studies on Transport Policy*, 101497. <https://doi.org/10.1016/j.cstp.2025.101497>

WORKING PAPERS

- ✧ Liu, J., Dou, Z., Wang, S., Oluwumi, T., & Gao, Y. (Under Review). A Comparative Analysis of Pilot and Non-Pilot Students' Perceptions of AI-Integrated Online Learning Platforms in Aviation Higher Education
- ✧ Liu, J., Kong, N., & Gao, Y. (Under Review). Are Airport Expansion Catalyst of Urban Development? Unveiling the Influence of New Terminals on Surrounding Land Use
- ✧ Gao, Y & Liu, J. (Under Review). Frequent Flyer Programs in Academic Research: A Literature Review of Research Progress Since 2000
- ✧ Dou, Z., Wang, S., Liu, J., & Gao, Y. Predicting Airport Passenger Arrivals from Flight Schedules: An Explainable Machine Learning Method
- ✧ Wang, S., Liu, J., Dou, Z., & Gao, Y. Do Airlines Have Home Court Advantage? Exploring the Relationship Between Airline Dominance and Taxi-out Time

CONFERENCE ACTIVITIES

- ✧ **Liu, J., Kong, N., & Gao, Y.** (2024, October). *The role of airport expansions in urban growth: The impact of new terminals on local land use* [Poster & Presentation]. Applied Geography Conference, San Marcos, TX.
- ✧ **Gao, Y. & Liu, J.** (2024). Navigating the Skies of Airline Customer Loyalty: A Comprehensive Review of Airline Frequent Flyer Program Studies. Paper presented on the 27th Air Transport Research Society Conference. Lisbon, Portugal.
- ✧ **Wang, S., Dou, Z., Oluwumi, T., Liu, J., & Gao, Y.** (2024). The Domino Effect of Airport Dehubbing: A case study of Cleveland Hopkins International Airport and Akron Canton Airport. Paper presented on the 27th Air Transport Research Society Conference. Lisbon, Portugal.
- ✧ **Wang, S., Dou, Z., Liu, J., & Gao, Y.** (2023). Spatial Determinants Behind the Seasonal Variations of Commercial Flights Across the United States [Poster & Presentation]. 2023 GIS Day Conference, West Lafayette, IN.
- ✧ **Liu, J., Beck, C., & Gao, Y.** (2022). Passengers' Perceptions of Airlines' Logo Design and Their Business Models. Paper presented on the 25th Air Transport Research Society Conference (Hybrid). Antwerp, Belgium.
- ✧ **Gao, Y., Liu, J., & Wang, S.** (2022). Visualize Your Research Work. Workshop presented on the 2022 UAA Annual Collegiate Aviation Conference & Expo. Colorado Springs, CO.
- ✧ **Wang, S., Liu, J., Xie, H., & Gao, Y.** (2022). What is Aviation Research Talking About? A Bibliographic Analysis of Three Aviation Journals during 2011-2021 [Poster & Presentation]. Purdue University School of Aviation and Transportation Technology Poster Symposium. West Lafayette, IN.

TEACHING EXPERIENCE

- ✧ **AT 102 - Aviation Business**, Purdue University *Fall 2024*
Role: Course Instructor
Tasks: In-person lecturing; Grading.
- ✧ **AT 338 - Airline Management**, Purdue University *Spring 2022*
- ✧ **AT 546 - Aviation Financial Instruments and Operations**, Purdue University *Fall 2021*
Role: Graduate Teaching Assistant
Instructor: Dr. Yi Gao
Tasks: Managed and recorded online airline simulation platforms backstage data; Grading.

RESEARCH EXPERIENCE & PROJECT

- ✧ **The Data Mine, Purdue University** *Graduate Data Science Researcher 2025*
Corporate Partner: Johnson & Johnson
Collaborated on Foundational Models project for early-phase clinical trials, applying Generative AI (LLMs, GANs, VAEs, Diffusion Models) and predictive modeling (XGBoost).
Applied tools including Python, R, and SQL in large-scale biomedical data analysis.
- ✧ **[ACRP Synthesis 131] State of Airport Loyalty Programs** *Graduate Research Assistant 2022*
- ✧ **Sponsor:** Airport Cooperative Research Program (ACRP), Transportation Research Board (TRB), National Academies of Sciences, Engineering, and Medicine (NASEM)
Project Scope: Investigating customer loyalty programs in different domains, especially major airports in the US. Providing a comprehensive overview of the current status of airport loyalty programs.
- ✧ **[ACRP 01-41] Airport Blockchain Implementation Guidebook** *Graduate Research Assistant 2021*
- ✧ **Sponsor:** Airport Cooperative Research Program (ACRP), Transportation Research Board (TRB), National Academies of Sciences, Engineering, and Medicine (NASEM)
Project Scope: Collecting and summarizing blockchain and associated technologies implementation in the

aviation industry to provide business solutions and operational efficiencies for airport decision-makers and stakeholders.

ACADEMIA SERVICE & ACTIVITIES

- ✧ Reviewer
 - Journal of Air Transport Management (JATM)
 - Collegiate Aviation Review-International (CAR-i)
- ✧ Member
 - American Association of Airport Executives (AAAE)
 - American Institute of Aeronautics and Astronautics (AIAA)
 - University Aviation Association (UAA)
 - Air Transport Research Society (ATRS)

INTERNSHIP

- ✧ **China Mining Logistics Holdings Co., Ltd** *International Logistics Analyst* **2020**
 - Assisted with freight forwarding, customs declaration and inspection, filling out, photocopying and binding various documents
- ✧ **Citic-Prudential Fund Management Co., Ltd.** *Financial Data Analyst* **2019**
 - Organizing the records of the brokerage roadshow/fund research
 - Collecting and analyzing information on the macroeconomy, capital market, and public offering fund
 - Cleaning up and processing data

HONORS & AWARDS

- ✧ Graduate Ross Fellowship, Purdue University **2023-2027**
- ✧ Industry Advisory Board Research Poster Symposium **2022**
- ✧ First Prize for 16th National Competition of Transport Science and Technology for University Student **2021**
- ✧ Purdue Bands & Orchestras Scholarship **2021**
- ✧ China Undergraduate Mathematical Contest in Modeling **2020**
- ✧ Top Art Scholarship of Beijing Jiaotong University **2018 - 2020**

COMMUNITY SERVICES & ACTIVITIES

- ✧ **Aviation Graduate Council (AGC), Purdue University** *Member* **Fall 2022**
 - Present for research roundtable
- ✧ **Concert Orchestra, Purdue University** *Concertmaster* **Fall 2022**
 - Organize orchestra rehearsals and concerts
 - First violin sectional rehearsal leader
 - Perform violin solo part
- ✧ **Festival Chorus and Orchestra, Purdue & Ball State University** *Concertmaster* **Summer 2022**
 - Organize rehearsals during summer tour to Europe
 - Perform violin solo part
- ✧ **Philharmonic Orchestra, Purdue University** *Associate Concertmaster* **2021**
 - Perform part of the violin solo works
- ✧ **Suzuki Association of the Americas** *Registered Suzuki Violin Teacher* **2022**
 - Core unites training

VOLUNTARY

- ✧ **Chinese International Baptist Ministry** *West Lafayette, IN* **2022**
 - Church Accompanist

✧ Covid-19 Prevention and Control	<i>Beijing, China</i>	<i>2020</i>
– Community volunteer		
✧ Xizhongjie Elementary School	<i>Beijing, China</i>	<i>2019</i>
– Voluntary violin teacher		
✧ China-Japan Friendship Hospital	<i>Beijing, China</i>	<i>2018</i>
– Guide Volunteer		