Dr. Jingxi(Jeffery) Liao

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Current teaching

- MATH 1180 - College Math for Business, Economics and Related Fields, 2 courses.
- MATH 1780 - Probability Models, 2 courses.

Education

University of Central Florida Jan 2021 - Aug 2025
Doctor of Philosophy - PhD, Financial Mathematics Orlando, Florida

- GPA: 3.72/4.0
- Dissertation: Insurance with investments
- Advisor: Dr.Jiongmin Yong
- Related courses: Financial Math, Computational Methods for Financial Mathematics, Risk Managment for Financial Math

University of Central Florida Jan 2021 - Aug 2023
Master of Science- MS, Financial Mathematics

Columbia University in the City of New York Aug 2018 - Feb 2020
Master of Arts - MA, Statistics New York, New York

- GPA: 3.13/4.33
- Related: courses: Statistical Computing & Introduction to Data, Advanced Data Analysis, Actuarial Model

University of Connecticut Jul 2014 - May 2018
Bachelor of Arts - BA, Actuarial Science/Mathematics Storrs, Connecticut

- GPA:3.62/4.0
- Advisor: Patricia Teufel
- Honors/Awards: Dean's List Liberal Arts & Sciences in Spring 2016
- Related courses: Intro to Actuarial Science, Programming for Actuaries, Actuarial Statistics, Actuarial Mathematics
- Activities and Societies: President and Co-founder Chinese Actuarial Club
  - Built the first Chinese Actuarial Organization in UCONN, Found the funding and invited speakers to share experience.

Research Interest

Actuarial Mathematics

Chapters in Contributed Books

X. Li, J. Liao, and T. Gao, “Airbnb (air bed and breakfast) listing analysis through machine learning techniques,” in Biomedical and Business Applications Using Artificial Neural Networks and Machine Learning, pp.209-232, IGI Global.

PhD dissertation

Liao, Jingxi, "Insurance With Investments" (2025). Graduate Thesis and Dissertation post-2024. 339.
https://stars.library.ucf.edu/etd2024/339

Research Experience

Insurance with investments Oct 2023 - Aug 2025
PhD dissertation

- Applied optimal control theory in life insurance
- Studied Ruin probability problem in insurance

Biomedical and Business Applications Using Artificial Neural Networks and Machine Learning Jan 2021 - Oct 2021
Book Chapter Contributor

- Cooperatively wrote Chapter 8 "Airbnb (Air Bed and Breakfast) Listing Analysis Through Machine Learning Techniques"

- Used Decision Tree, Hierarchical Clustering, K-Means Clustering Principal Component Analysis and Random Forest to analyze the data from Airbnb

Teaching Experience

University of North Texas Aug 2025 - Present

Lecturer in Mathematics and Director of Actuarial Science certificate program

- Teach probability, Financial Mathematics. Math for Business.
- Coordinate Actuarial Science certificate program
- Advising actuarial students
- Coordinate actuarial events

EXCEL program/Math Department, University of Central Florida Jan 2021 - Aug 2025

Graduate Teaching Associate/Assistant Orlando, Florida

- Independently taught Calculus with Analytic Geometry II, Calculus with Analytic Geometry III, Ordinary Differential Equations (instructor of record)
- Lectured many recitations in Calculus with Analytic Geometry I and Calculus with Analytic Geometry II
- tutored student in Mathematics Assistance and Learning Lab for the subject in College Trigonometry, Intermediate Algebra, Pre-Calculus and Calculus with Analytic Geometry I
- Worked in EXCEL Lab center to tutor student for the subjects of Ordinary Differential Equations, Calculus with Analytic Geometry I, Calculus with Analytic Geometry II, Calculus with Analytic Geometry III and Linear algebra
- Was teaching assistant of College Trigonometry, Intermediate Algebra

Meihua School Jul 2020 - Oct 2020

International School Math & Science Teacher (Full Time) Suzhou, Jiangsu, China

- Taught Algebra 1, Algebra 2 and Mathematical Physics to the student in grade 8, 9 and 11 respectively with English (Class Mode: Face to face)
- Taught Advanced Math (Probability & Introduction of R programing) to the student in grade12 with English (Class Mode: Face to face)

Presentation Experience

UConn Goldenson Center Case Study Competition Apr 2018

- presented "Surrender rate studies through stochastic simulation"
- Project co-oporator: Lincoln Financial Group
- By assuming face amount and duration as important factors in Surrender rate, we simulated a portfolio with a reasonable distribution of face amount and duration and estimated surrender rate for each policy with confidence intervals.
- Conclusion: Surrender rate under face amount $10000-$50000 and duraiton 1- 4 is biggest

Professional Experience

Pingan Life insurance Co., ltd. May 2018 - Jul 2018

Actuarial assistant (Intern) Shenzhen, Guangdong, China

- Learnt to build pricing model for different insurance products and used it measure the current value of some products.
- Used the gold collar test to calculate the premium of different insurance products and finally wrote the tutorial of this test.
- By observing the claim payments of a product in previous years, calculated the premiums in the future.
- Used python to test the stability of products base on different rules.

Volunteer Experience

Hartford Let's Get Ready Jun 2017 - Aug 2017

Math tutor and college advisor Hartford, Connecticut

- Taught SAT math to high school students
- Shared college experience and gave advices of college application to high school students

Actuarial Exams

- Society of Actuaries (SOA) Actuarial Exams:

Probability (P) Exam (6 out of 10)

Financial Mathematics (FM) Exam(9 out of 10)

Models for Financial Economics (MFE) Exam (8 out of 10);

Short-Term Actuarial Mathematics (STAM) Exam (10 out of 10)
Statistics for Risk Modeling (SRM) Exam (Transferred)
Fundamentals of Actuarial Mathematics–Long-Term (FAM-L) Exam (7 out of 10)
Predictive Analytics (PA) Exam (7 out of 10)

- Validation by Educational Experience (VEE):

VEE Applied Statistics
VEE Corp Finance
VEE Economics

- I just need couple online modules to earn Associate of the Society of Actuaries (ASA) which is expected to achieve in 2025

Technical Skills

Microsoft Office (Proficient)
Latex (Proficient)
R programming (Intermediate)
Python (Intermediate)
SQL(Beginner)

Languages

Mandarin (Native)
Cantonese (Native)
English (Professional working proficiency)