

# JIE NIU

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## 🎓 EDUCATION

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### Queen's University at Kingston

2017 – 2022

*Bachelor of Computing (Hon.)* specialize in Computer Science and Mathematics

## 🏛️ ACADEMIA EXPERIENCE

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### Adjunct Instructor

Jan. 2023 – Apr. 2023

St. Lawrence College, Kingston, ON

COMP 53 – Intermediate Database

- Taught beginning to intermediate SQL concepts for database design and querying;
- Facilitated class discussions in-person and via online hybrid;
- Introduced students to advanced database topics.

### Research Assistant

Jan. 2022 – Present

Smith School of Business, Queen's University

Delivered technical components to support research projects.

*Past and Current Projects:*

- Conducted geospatial analysis to map 3G mobile coverage across U.S. Census ZIP Code Tabulation Areas (ZCTAs) using shapefiles and data in GeoTIFF format.  
Tools used: R, ArcGIS  
Supervisor: *Prof. Shu Zhang & Yu Hou*
- Data Mining on Bloomberg Terminal combined with financial databases (WRDS). Wrote automated scripts to extract current corporate credit ratings and update in database.  
Tools used: R, PostgreSQL, GitHub CI/CD Actions  
Supervisor: *Prof. Evan Jo*
- Research data processing on retirement, longevity, and annuity pricing. Virtual file system implementation for database file storage.  
Tools used: R, PostgreSQL, Linux HPC  
Supervisor: *Prof. Evan Jo*
- Web scraping for financial data from Yahoo Finance. Built time series data and conducted sentiment analysis on user conversations.  
Tools used: Python, R, Docker  
Supervisor: *Prof. Jingyu Zhang*

### Teaching Assistant

Jan. 2022 – Present

Smith School of Business, Queen's University

- COMM 121 (Introduction to Finance, Fall 2024)  
Head TA - managed course logistics, facilitated exams & accommodations, maintained student records.  
Supervisor: *Prof. Alison Taylor & Evan Jo*
- COMM 420 (Financial Technology and Innovation, 2022/23/24)  
Graded assignments; facilitated R programming workshops for quantitative trading.  
Supervisor: *Prof. Evan Jo*

- MGMT 921 (Capital Markets, Theory and Empirics, 2022/23/24)  
Conducted workshops and tutorials on R, Python, PostgreSQL, and WRDS.  
Supervisor: *Prof.* Evan Jo
- COMM 493 (Analytics & AI for Business, Winter 2023)  
Graded business case and coding assignments; developed technical documentation for students.  
Supervisor: *Prof.* Shaun Cahill
- COMM 161 (Intro. to Mathematical Analysis, Fall 2022)  
Head TA - supervised grading, organized weekly tutorials, maintained student records.  
Supervisor: *Prof.* Matthew Thompson

## PROFESSIONAL EXPERIENCE

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### Administrative Assistant

Apr. 2021 – Present

Smith School of Business, Queen's University

Supported faculty members, utilized PeopleSoft, managed course websites through D2L, prepared expense claims, organized supplies, and performed other essential tasks as needed.

### Technical Support Representative

Jan. 2021 – Apr. 2021

Kingston Online Services, Kingston, ON

Assisted customers by troubleshooting internet connection and email issues, configured hardware, and responded to calls and support tickets in a help desk.

## PERSONAL PROJECTS

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- LinkedIn data harvesting
- SEC EDGAR archiving and analysis
- Studying for RHCSA linux certification
- Frontend and backend design of a homomorphic encryption algorithm

## SKILLS

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- Writing:  $\text{\LaTeX}$
- Programming Languages: R == SQL > Python == C > Java
- Platform: Mac; Linux; HPC Clusters (*High Performance Computing*)
- Development: Containers (Docker, Podman, Singularity), Web Development (Django, Flask, R Shiny)

## HONORS AND AWARDS

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Queen's University Excellence Scholarship

Sep. 2017

Queen's University General Bursary

Apr. 2020

## MISCELLANEOUS

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- Notable undergraduate courses: *Logic for Computer Science*, *Calculus III*, *Graph Theory*
- Languages: English (Professional), Mandarin (Native)
- Citizenship: Chinese