

# Jiayu (Gavin) Zhang

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## Academic Objective

Finance professional with strong foundation in actuarial science and 4+ years applying data science and machine learning in enterprise environments. Seeking to advance expertise in statistical modeling, deep learning, and computational methods through rigorous academic study in data science.

## Academic Interests

- **Machine Learning in Finance:** Applications of deep learning and neural networks for financial risk assessment, fraud detection, and algorithmic trading systems
- **Natural Language Processing:** Document analysis, sentiment analysis, and automated information extraction for financial and business intelligence
- **Statistical Modeling:** Advanced statistical methods for predictive analytics, time series forecasting, and actuarial science applications
- **Data Engineering & Ethics:** Scalable data infrastructure, responsible AI implementation, and ethical considerations in automated decision-making systems

## Education

**Bachelor of Commerce (Actuarial Science)**, University of Melbourne Jun 19–Dec 21  
Global Scholars Award; H1 Honours

**International Baccalaureate Diploma**, High School 2019  
Score: 43/45; Proxime Accessit (Second in Class)

**Student Exchange Programme (Data Science)**, National University of Singapore Dec 21–Jun 22  
Honours level Data Science  
*Research Project:* Applications of LSTMs in Financial Data Modelling and Prediction - comprehensive study examining long short-term memory networks for time series forecasting in financial markets, with focus on Singapore market dynamics.

## Projects

**Financial Dashboarding** — Real-time reporting  
*Tech:* Python, Snowflake

- Built interactive dashboards with a Python backend connected to Snowflake, enabling real-time financial reporting and KPI visualization.

**Automated Invoice Processing (AIP)** — OCR + LLM extraction  
*Tech:* OCR, LLMs, PostgreSQL (vector)

- Developed end-to-end invoice processing with OCR, document parsing, and LLM-based extraction; used a PostgreSQL vector database for semantic search.

**Algorithmic Market Maker** — Low-latency trading system  
*Tech:* Python, AsyncIO, WebSockets

- Built a high-frequency trading system consuming real-time market data over WebSockets with an asynchronous, low-latency architecture.

## Awards & Honors

**Melbourne Global Scholars Award** — University of Melbourne 2019  
Prestigious scholarship recognizing academic excellence and global leadership potential.

- Physics Olympiad High Distinction** 2018  
Achieved high distinction in national physics competition, demonstrating advanced problem-solving in theoretical and applied physics.
- Australian Mathematics Competition** 2016–2018  
Multiple awards including Distinction, High Distinction, and Prize recognition for exceptional mathematical reasoning and analytical skills.
- PwC AI Hackathon — Winning Team** 2024  
Led winning team in company-wide AI innovation competition, developing advanced machine learning solution for business process optimization.
- Competition Participation** 2022–2024  
Active participant in premier analytical competitions: 180 Degrees Consulting Case Competition, EY Data Analysis Competition, and Optiver Market Making Competition, demonstrating quantitative problem-solving and teamwork under pressure.

## Experience

- Senior AI Analyst (Finance) — Ignite Tech** Jun 25–Ongoing
- Implemented scalable workflows in Zapier, n8n, and Python across operations, reducing costs and improving EBITDA margin by 20%.
  - Managed revenue operations and post-acquisition integration, setting up BigQuery & Dataform reporting that reduced revenue slippage by 85%.
  - Championed AI tool adoption across teams, saving 2+ hours per person weekly.
  - Reported to the CFO on efficiency, ROI, and AI initiative adoption; owned traditional financial reporting.
- Senior Consultant (Deals) — PricewaterhouseCoopers** Nov 21–Jun 25
- Built FastAPI backends for financial data processing with validation, improving retrieval speed by 40% and achieving 99.9% data accuracy.
  - Engineered scalable, parallelized data pipelines applicable to customer data integration workflows.
  - Led data-driven analyses across manufacturing, SaaS, and pharma for deals totaling \$1B+.
  - Enhanced due diligence with AI document processing and natural language data query.
  - Translated complex business requirements into technical solutions for cross-functional stakeholders with consistently strong client feedback.
- Supply Chain Data Analyst — 3Fold Resources** Aug 20–Nov 21
- Designed Python-based pipelines to automate procurement workflows, reducing manual work by 3+ hours weekly.
  - Built analytics to optimize supplier selection, cutting costs by 75% for key components.
- Sales Data Analyst — RL Education, Melbourne** Dec 2019–Jun 2020
- Analyzed customer acquisition data and conversion metrics to optimize educational program targeting.
  - Built predictive models to identify high-value leads and improve sales pipeline efficiency.
  - Used statistical analysis to measure campaign effectiveness and inform data-driven marketing decisions.
- Digital Analytics Specialist — Shizuishan Community Centre, China** Dec 2017–Feb 2018, Dec 2018–Feb 2019
- Analyzed social media engagement data and community participation metrics using Chinese language datasets.
  - Implemented data visualization dashboards to track public program effectiveness and attendance patterns.
  - Applied statistical methods to optimize content strategy and improve community engagement rates.
- Performance Data Analyst — Hybridd Marketing, Melbourne** Mar 2020–Jun 2021
- Analyzed sales performance data to identify training needs and optimize team productivity metrics.
  - Developed statistical models to predict sales outcomes and measure training program effectiveness.
  - Created data-driven assessment frameworks using quantitative methods to evaluate performance trends.

**Founder & Data Science Consultant** — ZhangData 2023–Present

- Founded independent consulting practice specializing in AI and data science solutions for SMEs and startups.
- Delivered end-to-end data analytics projects including predictive modeling, business intelligence, and automation.
- Built custom machine learning solutions for client operational optimization and strategic decision-making.

**SEO Data Analyst** — Knog, Melbourne Dec 2020–Apr 2022

- Conducted keyword analysis and web traffic data mining to optimize search engine rankings for cycling brands.
- Built automated data pipelines to track retailer information accuracy and identify data quality issues.
- Applied statistical analysis to content performance metrics, improving organic search traffic by 40%.

**Ecommerce Data Analyst** — Various Online Platforms Dec 2017–May 2020

- Analyzed supplier pricing data, MOQ patterns, and logistics metrics to optimize procurement decisions.
- Built predictive models for customer complaint resolution and supplier performance evaluation.
- Developed KPI dashboards and conducted statistical analysis of sales performance across multiple channels.

## Publications & Speaking

**AI Applications in Financial Distress Analysis** — PricewaterhouseCoopers 2024

Presented to senior leadership on innovative AI methodologies for analyzing financial distress indicators and enhancing due diligence processes in M&A transactions.

**Career Panel Speaker** — ACFA (Australian Chinese Finance Association) 2022–2024

Regular speaker at career development panels, sharing insights on transitioning from actuarial science to data science and AI roles in finance.

**Technical Blog** — [www.zhangdata.com](http://www.zhangdata.com) 2023–Present

Published articles on data science applications in finance, machine learning in business operations, and AI implementation strategies.

## Skills

**AI/LLM:** LangChain Suite, Vertex, Vector DBs, RAG, OpenAI, Bedrock, MCP

**Programming:** Python, R, SQL, Julia, Haskell, Typescript

**Data Engineering:** ETL & ELT, Data Warehousing, Airflow, PostgreSQL, Snowflake, RDS, BigQuery

**Backend/Infra:** FastAPI, Docker, Kubernetes, Serverless Functions, Git

**Analytics/BI:** PowerBI/DAX, Tableau, Looker, Jupyter

**Languages:** English (Native); Mandarin (Native); Spanish (Professional); Russian (Intermediate); Arabic (Intermediate)

## Certifications

**CFA Level 1** — CFA Institute 2024

Chartered Financial Analyst credential demonstrating proficiency in investment analysis, portfolio management, and financial modeling.

**Chartered Accountants Foundation Program** — CPA Australia 2020–2021

Completed core subjects: Financial Analysis, Business Law, and Financial Modelling. Developed comprehensive understanding of accounting principles, legal frameworks, and quantitative financial analysis methods.

**AI Project Manager** — Coursera 2024

Completed comprehensive project management certification focused on AI implementation, agile methodologies, and cross-functional team leadership in technology environments.

## Leadership & Service

**Deals AI Champion** — PricewaterhouseCoopers 2023–2025

- Led AI adoption initiatives across the Deals practice, driving innovation in due diligence and financial analysis processes.
- Developed training programs and best practices for AI tool integration in M&A workflows.
- Collaborated with technology teams to implement scalable AI solutions for deal teams.

**Graduate Representative** — PricewaterhouseCoopers 2022–2023

- Represented graduate cohort interests to senior management and HR teams.
- Facilitated communication between new graduates and leadership on workplace policies and professional development.
- Organized graduate networking events and mentorship programs.

**Director** — Melbourne University Dancesport Society 2020–2021

- Directed strategic planning and operational management for competitive dancesport society with 150+ members.
- Coordinated national competition participation and training programs for ballroom and Latin dance disciplines.
- Managed budget allocation, event logistics, and partnerships with external dance organizations.

**Sponsorship Data Analyst** — Actuarial Students' Society, University of Melbourne Mar 2019–Oct 2020

- Analyzed sponsorship ROI data and partnership metrics to optimize corporate relationship strategies.
- Used data analytics to identify high-value sponsor prospects and improve conversion rates.
- Built performance dashboards to track event attendance and measure sponsor engagement effectiveness.

## Community Service

**Wildlife Conservation Volunteer** — Africa 2018

- Participated in wildlife conservation and research initiatives supporting endangered species protection.
- Contributed to data collection and field research for conservation monitoring programs.
- Engaged in community education and awareness programs promoting sustainable wildlife practices.

**Language Exchange Volunteer** — AMES Australia 2017–2019

- Provided conversational English support for new immigrants and refugees in community integration programs.
- Facilitated cross-cultural communication and language learning in group and one-on-one settings.
- Supported multicultural community events and integration activities.

**Digital Literacy Volunteer** — Local Library 2016–2018

- Provided technical support and digital literacy training for elderly community members.
- Taught basic computer skills, internet navigation, and digital communication tools.
- Developed patient, accessible teaching methods for diverse technological comfort levels.

## Mentorship

**ML/AI Development Mentor** — Romitan City Government, Uzbekistan 2025

- Mentored ML/AI developers in application architecture and best practices for government infrastructure constraints.
- Enhanced team capabilities in machine learning implementation and scalable system design.
- Facilitated knowledge transfer sessions on modern development workflows and deployment strategies.

## Professional Development

**Conference Participation** — Data Science & AI Industry Events

2022–Present

Regular attendee at major conferences including PyData, AI Summit, Data Science Melbourne, and FinTech Australia events. Active participant in workshops, networking sessions, and technical presentations to stay current with industry trends and emerging technologies.

## References

References available upon request.