

Shayan Abbasi

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PROFILE

A seasoned **Econometrist and Gen AI Strategist** with **3 years of hands-on experience in Data Analysis in Finance and Marketing**, holding an **PhD in Quantitative Marketing** from McMaster University. Proven track record in Causal Inference, Marketing Strategy and production-grade AI Automation solutions. Specilized in digital transformation and Gen AI Channel distruption, transforming data into actionable insights, and Statistical Experiment Design.

Cloud expertise in **AWS** (Lambda, EC2, SageMaker, Aurora, Airflow, Elasticsearch), and **GCP** (Vertex AI, Kubernetes, VM instances).

EXPERIENCE

Quantitative Marketing Researcher

Dec 2022 – Dec 2024

McMaster University

Hamilton, Canada

- Developed an **autonomous trading agent** utilizing **Hierarchical Reinforcement Learning** and FastDQN; implemented advanced risk-mitigation strategies that outperformed baseline benchmarks by 185%.
- Engineered a **Multi-Armed Bandit (MAB)** framework for dynamic resource allocation using **Meta's PEARL** library, improving convergence rates by 13% compared to conventional epsilon-greedy strategies.
- Published research and instructed "Statistical Data Analysis," mentoring graduate students on applying **Bayesian Inference** and Python-based econometric modeling to high-frequency datasets.

Sessional Instructor

Sep 2025 – Jan 2026

DeGroote School of Business, McMaster University

Hamilton, Canada

- Designed and delivered curriculum for "Introduction to Marketing" and "Statistical Data Analysis," focusing on **causal inference** and the application of ML in consumer behavior modeling.

Data Scientist

April 2022 – Dec 2022

Shannon School of Business (FinTech Project)

Remote

- Architected **scalable ensemble tree models** for customer segmentation using **PySpark**, processing 4M+ records to optimize targeting strategies, contributing to a 112% growth in Monthly Active Users (MAU).
- Led the development of an end-to-end **ETL pipeline** using Django and ORM, integrating 50+ financial KPIs to drive real-time executive decision-making and strategic growth forecasting.
- Designed **Fraud Detection systems** for OTLP wallet transactions using anomaly detection, while implementing **A/B testing** frameworks that increased conversion rates by 35%.

Quant Developer

Oct 2020 – Dec 2021

Stealth Quant Team (Logistics & Retail)

Tehran, Iran

- Co-engineered an **automated inventory reordering system** for 15 hypermarkets, utilizing **stochastic optimization** to manage 8,000+ SKUs and 200+ suppliers, significantly reducing stock-outs.
- Implemented indoor location tracking and spatial data models for a "Low-Cost Amazon Go" prototype in collaboration with **Rocket Internet**.
- Optimized complex **SQL queries** and data warehousing structures, reducing latency for financial reporting and operations teams by 40%.

Data Scientist

Jan 2024 – June 2025

United For Iran

Remote

- Applied **geospatial analysis** and NLP to visualize and identify patterns in large-scale user reports, utilizing Python and R to develop risk-assessment dashboards.
- Conducted **fuzzy matching** and data harmonization on disparate, noisy datasets to clean and prepare data for longitudinal research studies.

EDUCATION

Ph.D. in Business Administration - Quantitative Marketing McMaster University Thesis: mobile application ecosystem emphasizing GenAI privacy, Accessibility and Pervasiveness in Decision Making. - Methods: DiD, Panel Data Regression, Zero-Shot Classification with Bart and ModernBERT, Fine-tuned LLM for classification, GCP custom model. Advisor: Manish Kraker	Aug 2022 - March 2026 Hamilton, Canada
Master of Applied Economics Autonomous University of Barcelona Master Thesis: Market Share Analysis in U.S. Markets.	Sep 2021 - Jul 2022 Barcelona, Spain
Master of Financial Economics Barcelona School of Economics Master Thesis: The financial consequences of corporate misconduct: A financial event study analysis.	Sep 2020 - Jul 2021 Barcelona, Spain
Bachelor of Economics University of Tehran - Graduated with distinction - Minor: Computer Science	Sep 2016 - Jul 2020 Tehran, Iran

SKILLS

Core Expertise: Data Science, high-frequency trading, Text Mining, Stochastic Models and Optimization (Reinforcement Learning), Machine Learning for Finance, Agentic AI, Statistical Testing, Natural Language Processing (NLP), Zero-Shot Learning, Predictive Modeling, Language Models (LLMs)

Programming and Data Engineering: Python, R, SQL (MySQL, PostgreSQL), MongoDB, Vector Databases

Cloud Platforms: GCP (Kubernetes, Vertex AI), AWS Certified (Lambda, EC2, SageMaker, Airflow, Elasticsearch)

Machine Learning: Scikit-learn, TensorFlow, PyTorch, Hugging Face, LanGraph

Data Tools/ DevOps: MLflow, Docker, Kubernetes, Git, CI/CD, GraphQL, Bash

Data Processing Libraries: Pandas, NumPy, SciPy, Spark, Data.table, Tidyverse

Web and Automation: REST APIs, Streamlit, Shiny App, Selenium

CONFERENCES AND PUBLICATIONS

Theory and Practice of Marketing (TPM) Conference, Austin, TX - Presented 2024

DeGroote Marketing Brown Bag Lunch (BBL) Seminar, Hamilton, ON - Presented 2024.

AMS Conference and Doctoral Symposium, Montreal, QC - Attendance 2025.

ET Symposium for Canadian Marketing Strategy, University of Guelph, ON - Attendance 2025.

Canadian Conference for Business Research Students (CCBRS): AI Horizons: Shaping the Future of Business Research Collaboration., Hamilton, ON - Presented poster 2025

HONORS AND AWARDS

Ph.D. Office (DSB) Scholarship, McMaster University — \$45,000 (2022–2025).

DeGroote Distinguished Student Award; \$7,500 (2022–2025).

DeGroote Supervisor Student Support; \$10,300 (2022–2025).

University of Tehran; Hami Scholarship for Distinguished Students (2019-2020).