Yavuz Shahzad

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Skills

Programming Languages: Python, R, SQL, LaTeX.
Libraries and Frameworks: Polars, Pandas, PySpark, Scikit-learn, Seaborn, Tidyverse.
Developer Tools and Platforms: GitHub, Databricks, Azure, Jupyter Notebook, Excel.
Non-technical: Outstanding communication skills; strong collaborative skills and attention to detail.

Education

McGill University — ***Montreal, QC***
BA in Statistics, Minor in Psychology — *2022 - 2026*

- GPA: 3.68/4.0
- **Coursework:** Mathematical Statistics I & II, Statistical Learning, Experimental Design, Sampling Theory, Honours Analysis I & II, Honours Algebra I & II.

Experience

Undergraduate Researcher — ***Montreal, QC***
McGill Clinical and Health Informatics Group — *Aug 2025 – Present*

- Part of the Data-Driven Decision Modeling (D3Mod) Lab, developed supervised machine learning models (NGBoost) for probabilistic prediction of individualized hemoglobin recovery after blood donation.

Data Science Intern — ***Toronto, ON***
Manulife — *May 2025 – Aug 2025*

- Developed time series models (Prophet) to forecast new regular premiums for life insurance products, reducing MAPE by 45% compared to legacy models.
- Conducted exploratory data analysis to recommend new lead types for proactive outreach to financial advisors and implemented the delivery of leads to wholesalers in a production PySpark pipeline.
- Presented leads pipeline and forecasting models to senior leadership, incorporating stakeholder feedback.

Undergraduate Researcher — ***Montreal, QC***
Brain Research and Imaging of Neurorehabilitation Lab: McGill University — *Jan 2023 – Sept 2024*

- Cleaned and analyzed data, conducted literature review, and drafted a manuscript about a novel treatment paradigm for those with chronic stroke.
- Analyzed neural markers of long-COVID survivors using a threshold-based β-burst detection algorithm.
- Served as a consultant to colleagues, refining analysis methodologies to ensure statistical rigor.

Research Intern — ***Boston, MA***
J. Philip Kistler Stroke Research Center: Harvard Medical School — *Jun 2022 – Aug 2022*

- Performed data abstraction from the electronic health records of over 200 patients. Study assessed the efficacy of left atrial appendage closure in preventing brain hemorrhages in atrial fibrillation patients.

Publications

- Milot, M.-H., Palimeris, S., **Shahzad, Y.**, Corriveau, H., Tremblay, F., Boudrias, M.-H. *Long-term benefits of a tailored strength training intervention on arm function in chronic stroke survivors: a follow-up study.* **Journal of Rehabilitation Medicine – Clinical Communications**, Vol. 8, February 2025. https://doi.org/10.2340/jrm-cc.v8.42941

Projects

InsideRadar: Insider Trading Detection on Polymarket

- Developed an XGBoost model and real-time data pipeline to identify bets on the world's largest prediction market that are likely to be influenced by insider information.
- Tools Used: Polars (data manipulation), SQLAlchemy (databasing), FastAPI (web framework), Scikit-learn, NetworkX (modeling).

Awards and Honours

NSERC Undergraduate Student Research Award ($8,800) *Apr 2024*

- Granted by the Natural Sciences and Engineering Research Council of Canada (NSERC), the USRA was awarded for research under the supervision of Dr. Marie-Hélène Boudrias of McGill's BRAIN Lab.

Dean's Honour List *Apr 2022*

Community Involvement

Editor: McGill Science Undergraduate Research Journal *2022 - Present*

- Facilitate the peer review of manuscripts and ensure the journal's standards of scientific rigour are consistently upheld.
- As former Managing Editor, lead MSURJ's outreach portfolio and ensured that the journal received numerous manuscript submissions.

Council Member: SUMS McGill *2024 - 2025*

- Participated in and voted during the meetings of McGill University's Society of Undergraduate Mathematics and Statistics Students (SUMS).

Work Eligibility

Citizenships: USA, Canada, Turkey.