

# Samir Mohammed

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## EDUCATION

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### University of Waterloo

September 2022 – Present

- **BMath (Honours)** in Computational Mathematics & Minors in Computer Science & Economics
- Passed **CFA Level I Exam** (November, 2025)
- **President's Scholarship of Distinction:** Achieved 95% or higher admission average
- **UKMT Senior Maths Challenge:** 2× Gold Award, Pink Kangaroo qualifier

## EXPERIENCE

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### Strategy & Data Analyst Intern

September 2025 – December 2025

*Capital One*

*Toronto, ON*

- Redesigned the customer-initiated Credit Limit Increase program decision logic by modeling approval outcomes under risk, profitability, and regulatory constraints
- Tested alternative uplift strategies using historical request data, designing a policy expected to increase approval rates by over 20x while maintaining portfolio risk thresholds
- Built Python-based simulations and valuation models to estimate portfolio-level P&L, evaluate risk across different industry conditions, and assess potential improvements in customer experience
- Presented analytical findings to senior stakeholders across Product, Risk, and Finance, with the recommended policy approved for rollout in 2026

### Business Analyst Intern

January 2025 – May 2025

*Communitech*

*Kitchener, ON*

- Redesigned the due diligence workflow for a federal funding program (ElevateIP), enhancing intake efficiency and standardizing eligibility assessments for 450+ startups
- Created process documentation and flowcharts to present the new system, which was adopted by program leadership and moved into development
- Automated the cost-audit pipeline with Apps Script and Excel logic, cutting manual review time by 95% through structured data extraction and validation rules

### Data Science & ML Intern

May 2024 – August 2024

*NeoStats*

*Bangalore, IN*

- Developed and deployed PySpark-based ML models in Azure Databricks to optimize in-app cross-selling, increasing conversions by 12% in A/B testing
- Streamlined data pipelines by integrating Microsoft Fabric with existing Azure workflows, reducing processing time by over 20%
- Created an internal resource-allocation tool using VBA and Excel macros, saving 12 hours of manual work per week and enabling clearer productivity insights

### Azure & AI Intern (WEA)

May 2023 – August 2023

*Microsoft*

*Remote*

- Developed a data-driven investment coaching system using Azure ML, virtual machines, and containerized workflows to deliver personalized financial recommendations
- Collaborated with a cross-functional team to design and deploy an MVP, integrating real-time financial data and delivering ahead of schedule

## PROJECTS

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### Review Rating Prediction using NLP and Deep Learning | *TensorFlow, roBERTa, Neural Networks*

- Trained and stacked transformer-based and LightGBM models to predict review ratings, optimizing performance through hyperparameter tuning and feature engineering
- Applied text-cleaning and sentiment-analysis techniques to enhance signal quality and reduce noise in model inputs

## TECHNICAL SKILLS

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**Languages:** Python (NumPy, pandas, sklearn, PySpark), SQL, C++, R, MATLAB/GNU Octave, VBA

**Other Certifications:** Microsoft Azure AZ-104 (Administrator Associate), AZ-305 (Solutions Architect Expert)

**Tools/Platforms:** Azure, Jupyter, Snowflake, Git, Unix Shell, Google Apps Script