

# Nusaibah Binte Rawnak

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## EDUCATION

### McGill University

Montreal, QC ( Winter 2023 - Present)

- B.A.Sc., Cognitive Science: Computer Science and Linguistics (Minor Statistics)
- **A2-level French** coursework with focus on oral and written communication; currently pursuing **B1**.

## WORK EXPERIENCE

### City Bank

Dhaka, Bangladesh (June 2024 - August 2024)

Summer Data Science Intern

- Built and deployed a predictive machine learning model with **Scikit-learn** and **PyTorch** to identify high-value customers, boosting deposit-targeting efficiency by **15%**.
- Applied **Pandas**, **spaCy**, and **NLTK** to process structured and unstructured data using **Seaborn** visualizations to reveal behavioral patterns that improved customer targeting.

### Marie Stopes

Dhaka, Bangladesh (May 2023 - August 2023)

Business & Data Analytics Intern

- Analyzed client experience datasets using **Python**, **Excel (VBA)**, **Power BI**, and **Tableau** to uncover engagement trends and service gaps, informing data-driven marketing strategies.
- Created **interactive dashboards and reports** to visualize insights and guide evidence-based decisions, improving client retention and overall campaign performance.

## PERSONAL PROJECTS

### Track Split: AI-Powered Expense Tracker – TypeScript, Python

- Currently developing an expense platform with dynamic visualizations and **ML-driven** spending insights
- Integrating **OCR-based** bill scanning and intelligent group-splitting to streamline expense management
- Built with a **Next.js** frontend, serverless API routes, and **PostgreSQL** via **Prisma**, deployed on **Vercel**.

### Context Helps, But Only at Scale: Evaluating Practical LLMs for Time Series Forecasting

- Benchmarked LLM architectures (**Llama 3.2**, **GPT-4o-mini**, **Mixtral**) against classical methods (**ARIMA**, **ETS**) across 120 forecasting tasks spanning 12 domains including finance, energy, and transportation.
- Developed **XGBoost routing classifier** achieving **89.5%** of optimal performance while reducing LLM usage by **69%**, enabling practical deployment for resource-constrained environments.

## LEADERSHIP EXPERIENCE

### Rawnak's Bakery

Dhaka, Bangladesh and Montreal, QC (June 2022 - Present)

Founder and Manager

- **Founded and scaled** a home-based bakery, achieving consistent **revenue growth** through innovative digital marketing and customer engagement strategies.
- Leveraged **sales and operational data** to optimize inventory, streamline workflows, and manage **end-to-end operations** - from product development to financial planning - ensuring high customer satisfaction.

### McGill University

Montreal, QC (September 2025 - Present)

Course Assistant, MATH 240 (Discrete Structures)

- Led **weekly tutorials** and graded assignments for ~330 students via **Crowdmark**, ensuring fairness and accuracy across topics like logic, proof techniques, combinatorics, and graph theory.
- Provided **targeted feedback** to strengthen students' analytical reasoning while coordinating with the instructor to maintain grading standards and lesson consistency in a large-scale CS core course.

## TECHNICAL SKILLS

- **Languages:** Python, R, Java, C, SQL, C++, HTML, CSS, JavaScript, Clojure
- **Tools & Scripting:** Bash, Git, VS Code, Linux/Unix, Figma, Excel (VBA), Power BI, Tableau, spaCy, NLTK
- **Frameworks & Libraries:** NumPy, Pandas, Scikit-learn, PyTorch, Prisma, React, Next.js
- **Machine Learning & Data Analysis:** Regression, Neural Networks, NLP, Time-Series Forecasting
- **Mathematics:** Linear Algebra, Calculus, Probability, Statistics (Bayesian, Hypothesis Testing, Optimization)