

# HARSH TIWARI

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## Education

### University of Guelph

*Master's of Data Science*

Sep. 2024 – October 2025

Guelph, Ontario

### Sharda University

*Bachelors of Computer Science*

Sep. 2019 – October 2023

Greater Noida, Uttar Pradesh

## Relevant Coursework

- Introduction to Data Science
- Data Manipulation and Visualization
- Artificial Intelligence
- Analysis of Big Data
- Machine Learning for Sequences
- Mobile Devices App Development
- Analysis Of Spatial and Temporal Data

## Experience

### University of Guelph

*Business Intelligence Developer*

April 2025 – August 2025

Guelph, ON

- Developed Power BI dashboards analyzing \$38M+ revenue and 366K+ transactions, tracking KPIs like revenue per customer and average transaction value.
- Visualized 165K+ facility usage hours across gyms, pools, and arenas, segmented by semester, activity type, and peak time bins to optimize scheduling.
- Built data models and ETL pipelines, enabling real-time insights into top revenue packages (>\$1M) and payment method distribution (71% credit/debit card).

## Projects

### Smart Vertical Farm | *Python, Streamlit, tensorflow, XGBoost* | View Project

January 2025 - April 2025

- Developed an intelligent Streamlit web app using ML, enabling 20% improvement in resource allocation efficiency and data-driven decision-making for crop selection and yield optimization.
- Built and deployed 3 ML models (XGBoost + Neural Networks) that delivered 85% accuracy in crop price forecasting and 90% yield prediction accuracy, driving reliable profit and ROI projections.
- Designed features including profitability ranking across 15+ crops, inventory tracking for 500+ crop units, and 5 growing strategy options, helping farmers project up to 25% higher profit while reducing water and energy usage by 15%.

### Crime Watch | *R, Shiny, leaflet, plotly* | View Project

January 2025 - April 2025

- Developed an interactive Shiny dashboard analyzing 100,000+ crime records across Canada, enabling real-time exploration by year, geography, and crime category.
- Implemented dynamic filters, maps, and demographic comparisons (youth vs. adult crime) to help users identify top 5 fastest-growing and declining crime types across provinces and cities.
- Built a data explorer module with CSV/Excel export, allowing policymakers and researchers to access granular crime datasets for decision-making and reporting.

### SoberShot | *Python, MongoDB, Recommendation Systems* | View Project

October 2024 - December 2024

- Built a recommendation engine using collaborative filtering and deep learning to suggest beverages, achieving 85% accuracy in predicting user preferences.
- Developed an end-to-end system with a FastAPI backend (REST APIs), Streamlit UI, and MongoDB database, handling 1,000+ drink entries and supporting search, add, and recommend functionalities.
- Integrated Together API for cocktail recipe generation and deployed APIs on Render.com, enabling users to access real-time personalized drink suggestions through an interactive web app.

## Technical Skills

**Languages:** Python, Java, R, Dart, SQL

**Developer Tools:** MongoDB, VsCode, AWS, Android Studio

**Technologies/Frameworks:** Flutter, GitHub

## Leadership / Extracurricular

### GitHub Club

May 2022 – April 2023

*President*

*Sharda University*

- Led Sharda University's largest student club (1000+ members) as President, organizing 8+ events featuring 11+ speakers and engaging 750+ active participants.