Alvi Shariar Matin

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EDUCATION

Concordia University   Montreal, QC
Bachelor of Computer Science – Joint Major in Data Science   *Expected Dec. 2025*

EXPERIENCE

Flutter Developer (Freelance)   Dec. 2024 – Present
3 Amigos Group Inc, 1657 Saint-Catherine St W, Montreal   *Montreal, QC*

- Designed, developed, and deployed a cross-platform **Flutter mobile app** integrated with **Firebase Authentication, Firestore, and Cloud Functions** for full-stack inventory management.
- Built real-time features including **stock adjustments, audit trails, transaction history logging, and low-stock notifications** using NoSQL database triggers and backend logic.
- Implemented secure, scalable **role-based access control (RBAC)** for Admins, Managers, and Staff with active user adoption and ongoing usage.
- App is currently in production at the flagship location, with plans to expand across all **8 branches** to streamline restaurant-wide inventory workflows.

Junior Data Analyst   Jan. 2024 – Present
3 Amigos Group Inc, 1657 Saint-Catherine St W, Montreal   *Montreal, QC*

- Tracked and reconciled daily sales, expenses, and labor costs across multiple branches using **Excel**, **Google Sheets**, and point-of-sale exports.
- Created and maintained weekly operational dashboards and custom reports to support **management decision-making** and financial audits.
- Worked cross-functionally with operations and accounting teams to streamline **data entry**, validate discrepancies, and improve reporting accuracy.

PROJECTS

Medical Image Segmentation with Deep Learning | *Python, PyTorch, U-Net*   Mar. 2025

- Achieved **1st place** and won a **$1,000 cash prize** in a competitive project sponsored by **Huron Consulting Group**, collaborating in a team to develop the top-performing solution.
- Developed automated segmentation models using a proprietary dataset of **17,375 tissue images and masks** to assist pathologists in tissue analysis.
- Trained and evaluated **U-Net, U-Net++ with SCSE attention**, and **SegFormer with ResNet34 and EfficientNet encoders**, achieving a **final IoU of 93.38%**.
- Implemented a robust data augmentation pipeline with rotations, zooming, gamma correction, and Gaussian noise to improve model generalization.

CIFAR-10 Image Classification | *Python, PyTorch, scikit-learn, OpenCV*   Jan. 2025

- Developed image classification models on the **CIFAR-10 dataset** (**60,000 images**, 10 classes).
- Trained and compared **Naïve Bayes, Decision Tree, MLP, and CNN** models.
- Achieved **91.4%** test accuracy with a **CNN** using batch normalization and dropout.
- Optimized hyperparameters via **Grid Search**, tuning **learning rate, batch size, and layers**.
- Evaluated models with **confusion matrices, precision, recall, and F1-score (0.91)**.
- Applied **data augmentation** and **OpenCV preprocessing**, increasing accuracy by **3.7%**.

TECHNICAL SKILLS

Linguistic Languages: English, French, Spanish, Bengali
Languages: Python, SQL (PostgreSQL, MySQL), R, Java, JavaScript, HTML/CSS
Frameworks: Flask, FastAPI, PyTorch, TensorFlow, scikit-learn
Libraries: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Plotly, statsmodels
Developer Tools: Git, Docker, Google Cloud Platform, Jupyter Notebook, VS Code, PyCharm
Relevant Courses: Machine Learning, Deep Learning, Big Data Analytics, Data Visualization, A/B Testing