# Farhan Labib

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## EDUCATION

**University of Calgary**                                                          Calgary, AB
*BSc in Computer Science*                                                     *Expected 2027*

- **Relevant Coursework:** Database Management Systems, Data Structures & Algorithms, Software Project Management, Computer Networks, Software Design

## TECHNICAL SKILLS

**Languages**: Python, TypeScript, Java, JavaScript, SQL, HTML, CSS
**Frameworks & Tools**: React Native, Expo, Next.js, Flask, Streamlit, Supabase, MySQL, PostgreSQL
**ML/Data Libraries**: PyTorch, Scikit-learn, Pandas, NumPy
**Developer Tools**: Git, GitHub, Jira, ClickUp, Power BI, Tableau, VS Code, Linux

## PROFESSIONAL EXPERIENCE

**Software Developer**                                                     Sept 2025 – Present
*Gist Technologies Inc.*                                                          *Calgary, AB*

- Contributing to development and maintenance of a **production iOS app** on the **Apple App Store** built with **React Native**, **TypeScript**, and **Expo** as part of a **capstone industry partnership**.
- Implementing features for news browsing and personalization while resolving critical bugs affecting app stability.
- Supporting **Android pre-release testing** by debugging 10+ platform-specific issues and validating builds in test environments.
- Maintaining backend functionality with **Supabase** (Auth + PostgreSQL database) and external APIs, performing configuration updates and data management.
- Following **Agile development** practices including sprint planning, **GitHub PR reviews**, and versioned releases.
- Writing and maintaining 25+ **unit tests** for shipped features to improve code quality and prevent regressions.

## PROJECTS

**CIFAR-10 CNN Image Classifier** | *PyTorch, Torchvision, Scikit-learn, Streamlit, Power BI*        January 2026

- Created an **end-to-end** deep learning pipeline comparing a custom CNN (88.40% accuracy) against **ResNet18 transfer learning** (84.39% accuracy) on CIFAR-10.
- Trained models with Adam optimizer and learning-rate scheduling; persisted **best checkpoints** for reproducibility.
- Produced model diagnostics including **classification reports**, confusion matrices, and training curves; presented results through a **Streamlit dashboard**.
- Built a Python **ETL pipeline** to transform experiment outputs into BI-ready datasets and authored a **Power BI dashboard** for model comparison.

**MedML – AI-Powered Medical Prediction Toolkit** | *Python, Scikit-learn, Pandas, NumPy*        August 2025

- Developed a **modular ML toolkit** to clean, scale, and transform tabular datasets for consistent preprocessing and modeling workflows.
- Evaluated Logistic Regression and SVM on **Breast Cancer Wisconsin dataset** using **cross-validation** and **GridSearchCV**, achieving 98.1% accuracy and 0.985 F1 (LR) vs. 97.6%/0.979 (SVM) with 5-fold CV.
- Automated **diagnostic analytics** including feature importance, ROC/PR curves, and dimensionality reduction (PCA, TSNE) for model insights.

**Computer Component Store** | *Flask, MySQL, HTML, CSS, JS*                                  April 2025

- Architected a full-stack e-commerce platform with customer and admin portals, managing 60+ products.
- Implemented role-based admin workflows for inventory, orders, suppliers, and employees.
- Designed a normalized **MySQL** schema and built Flask endpoints for authentication, cart/checkout, and order history with data integrity constraints.

**Self-Checkout System - Java GUI Application** | *Java, Java Swing, JUnit, Eclipse IDE*        December 2024

- Designed UML diagrams and developed Java Swing POS system with barcode scanning, weight validation, and discrepancy handling.
- Engineered payment flows (coin, card, cash) and validated behavior with 20+ automated **JUnit** tests.