Mujtaba Fatah Mohammed

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EDUCATION

Simon Fraser University — B.Sc. Computing Science   *Burnaby, BC | Expected May 2028*
Relevant Coursework: Systems Programming, Data Structures & Algorithms, Software Engineering, Linear Algebra & MATLAB, Operating Systems | **Cert:** IBM Python for Data Science, AI & Development

TECHNICAL SKILLS

Languages: Python, C++, C, JavaScript, Java, SQL, MATLAB, Bash, HTML/CSS
Frameworks & Tools: Flask, FastAPI, Next.js, Node.js, React, PyTorch, TensorFlow, Git/GitHub, Google Cloud Platform, VS Code, Jupyter
Data & ML: Pandas, NumPy, Scikit-Learn, XGBoost, Prophet, Plotly, Matplotlib

WORK EXPERIENCE

Software Developer Intern — Omny-Idealabs   *Hyderabad, India | Dec 2024 – Feb 2025*
- Engineered a client-facing web platform achieving 37% faster load times through asset optimization, cross-browser compatibility, and responsive design across all major devices and screen sizes.
- Integrated 3 third-party APIs with redesigned UI/UX flows, boosting user engagement by 74% and delivering investment learning resources to a growing investor base.
- Implemented SSL encryption, secure authentication, and data protection measures achieving 100% compliance with financial data protection standards for sensitive client data.

IT Support Specialist — Fraser International College   *Burnaby, BC | Aug 2024 – May 2025*
- Resolved hardware, software, and network issues for 300+ students and staff, maintaining smooth campus-wide IT operations through systematic troubleshooting and escalation workflows.
- Configured and provisioned 150+ university accounts with 2-factor authentication, enabling secure registration for incoming students each semester with zero access errors.

PROJECTS

[Wayfarer-AI — Smart Travel Budget Optimizer](#)   *Jan 2026*
Python · FastAPI · Pydantic · Google Gemini 1.5 Flash · Vanilla JS · JSON Fallback
- Built a FastAPI backend integrating Google Gemini 1.5 Flash for generative hotel, restaurant, and activity recommendations with structured JSON output validation, temperature-controlled sampling, and automatic fallback to 100+ country static datasets.
- Designed Pydantic v2 data contracts for trip preferences, budget breakdowns, and itinerary selection; implemented a luxury-slider budget allocation system distributing spend across lodging, dining, and activities over user-defined trip durations.

[Neura-Linker — AI Student Matching Platform](#)   *Dec 2025*
Python · Flask · Node.js · Express · KMeans · Jaccard · Google Sheets API · Nodemailer
- Architected a polyglot full-stack system (Node.js + Flask) with Google Sheets as a live data source, retry logic, and automated email delivery — supporting end-to-end student matching from data ingestion through notification.
- Built a weighted similarity engine using KMeans clustering and Jaccard indexing across 10 profile dimensions with tunable weights (summing to 100) and diversity enforcement, producing ranked match results per student.

[ClimaZoneAI — Renewable Energy Forecasting | Winner: DataJam Hackathon](#)   *Oct 2025*
Python · XGBoost · Prophet · Ensemble ML · Flask · R · Plotly · Streamlit
- Cleaned and processed 1B+ global climate records down to 103K Canadian data points across 231 cities using R, then built a triple-model forecasting ensemble (Prophet + XGBoost + weighted average) achieving 94% forecast accuracy.
- Improved forecast R^2 by 34%, reduced RMSE by 62% and MAE by 69% through iterative cross-validation and hyperparameter tuning; deployed results via a Flask REST API and interactive Streamlit dashboard.

[Stone-See (KidneyNet) — Medical Image Classifier](#)   *Oct 2025*
Python · PyTorch · ResNet-18 · Flask · Next.js · scikit-learn · ROC/AUC
- Trained a ResNet-18 binary classifier from scratch on CT scan images using weighted Cross-Entropy loss, Adam optimizer, and ReduceLROnPlateau scheduling — achieving production-ready accuracy with full sklearn evaluation (AUC, F1, confusion matrix).
- Deployed a Flask inference API with a configurable sensitivity threshold and Next.js upload UI; built a Python process orchestrator with graceful shutdown handling, subprocess log routing, and health-check polling.