

Zohair Omar

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Technical Skills

Programming Languages: Python, SQL, Java, JavaScript, TypeScript, C, Go, R

Web Development & APIs: React, Next.js, Tailwind CSS, Flask, Streamlit, REST APIs, Postman, Docker, HTML/CSS

Testing & DevOps: Unit Testing (JUnit5), CI/CD (GitHub Actions), Version Control (Git)

Data Analysis & Visualization: Excel (Pivot Tables, VLOOKUP, Charts), Power BI, Pandas, NumPy, statsmodels, Matplotlib, Plotly

Cloud, Identity & Automation: Azure AD (OAuth2), Microsoft Graph API, SharePoint, Power Automate

Developer & Office Tools: VS Code, IntelliJ, PyCharm, Codenvy, Jupyter, Microsoft Word, PowerPoint

Education

Bachelor of Science, Computer Science & Mathematics (Minor in Economics) Expected April 2027
University of Calgary, Alberta

Bachelor of Science, Computer Science Sep 2022 - Sep 2024
University of British Columbia, Vancouver

Key Courses: Object-Oriented Programming, Data Structures & Algorithms, Functional Programming, Applied Machine Learning (Python), Introduction to Data Science (R)

Experience

Enactus UCalgary - WealthPath Jul 2025 – Present
Front-End Development Lead; React, TypeScript, Tailwind CSS *Calgary, AB*

- Lead a 4-person front-end team to develop a financial literacy platform for young adults; facilitate 2–3 Scrum meetings per week to align priorities and track deliverables.
- Built a reusable **React/TypeScript** component library adopted across 5+ core pages, reducing duplicate code by approximately 20%.
- Coordinated with the back-end team to define API contracts and resolve integration issues, accelerating feature delivery by 1–2 sprints compared to earlier timelines.
- Implemented a **CI/CD pipeline** with GitHub Actions that now runs automated linting and tests on every pull request; supported over 30 successful merges without regression.
- Built and deployed the platform pilot through partnerships with 2–3 schools, impacting 100+ students in the first semester.

TechNova February 2025 – Present
Co-Founder & VP Technical; React, Javascript, HTML/CSS, Python, SQL, Git *Calgary, AB*

- Built full-stack websites for clubs using React, Python & SQL, focusing on modular design and maintainability.
- Led a team of 4 developers through Agile sprints, leveraging Git and code reviews for clean, testable code.
- Implemented user login, responsive UIs, and dashboards to improve functionality & user experience for 100+ users.
- Created documentation and onboarding guides to support faster ramp-up and long-term technical system upkeep.

Agrius IT May 2024 - July 2024
Software Developer Intern; Python, SQL, HTML/CSS, JavaScript *Abu Dhabi, UAE*

- Fortified web application security by integrating enterprise-grade security protocols, including CORS, proxy settings, and error handling protocols; directly mitigated risk of cyberattacks while ensuring uninterrupted service for 1,000+ daily users accessing the platform.
- Documented workflows and contributed to internal SOPs for issue resolution and system operations using Word.
- Facilitated cross-functional collaboration to troubleshoot and deliver feature updates, resolving three critical system bottlenecks and meeting all deadlines ahead of schedule.
- Developed and debugged secure backend solutions involving user authentication and role-based access control using SQL, improving database query performance and security.

UBC Design League Dec 2022 – Sept 2024
Software Developer; Python, C, SolidWorks, Arduino IDE, Git *Vancouver, BC*

- Directed software design and system integration for a competition-ready autonomous robot with object detection, applying advanced Programming Language Theory for seamless integration.
- Programmed in Arduino IDE using C to develop algorithms for object detection, path planning, and robot control, achieving a 95% success rate in tests.

- Mastered SolidWorks for advanced 3D modeling and prototyping, enhancing design visualization and prototype development for an autonomous robot project.
- Integrated and programmed servo motors and ultrasonic sensors for obstacle detection and avoidance, increasing real-time perception efficiency by 25%.

Projects

UBC Thrifty Grocers; Go, Postman, React, JavaScript, Tailwind CSS

- Engineered high-performance back-end services for a grocery delivery platform using Go, leading to a 40% increase in server response speed, while quickly learning the language to contribute effectively to project success.
- Conducted extensive API testing using Postman and Bash Scripts, achieving a 100% success rate in test cases, ensuring flawless functionality and reliability of the web application.
- Applied security measures (CORS & proxies) and implemented access control logic in backend services to ensure users accessed only authorized resources, resulting in a 99% error-free deployment rate.
- Utilized React to create responsive webpages using Tailwind CSS for 50+ users to easily deliver groceries.

Oil & Gas Asset Integrity Dashboard; Power BI, SQL Server, SharePoint

- Built a production-like **Power BI** solution to monitor integrity KPIs for natural-gas assets: corrosion rate (mmpy), oil content (ppm), SRB levels, overdue inspections, anomaly tracking, certification compliance.
- Modeled **24 months** of data with Power Query + DAX; implemented role-based views for engineers vs. managers, slicers by department/month/year, and refresh simulation.
- Enabled proactive planning with backlog alerts and compliance trend summaries for stakeholder reports.

nwHacks 2024: Comfort Corner; JavaScript, HTML/CSS

- Led the development of a mental health support website at Western Canada's largest hackathon nwHacks 2024, achieving a top 10 placement with 653 participants.
- Successfully integrated OpenAI API to power a specialized chatbot created for mental health assistance, leveraging advanced natural language processing techniques to provide empathetic and accurate support.
- Designed and implemented a user-friendly interface featuring quotes and resources, enhancing visitor engagement.

Business Tracking Application; Java, JUnit, JSON, UML

- Developed a Java-based application using OOP principles and software development practices to help businesses track purchases and analyze revenue data.
- Built an interactive GUI with Java Swing for adding, filtering, and visualizing purchases; implemented unit tests with JUnit to ensure system reliability.

Heart Disease Prediction Model; R, tidyverse, Jupyter

- Built predictive ML model to classify heart disease likelihood based on 300+ patient records.
- Applied KNN algorithm after performing data cleaning, feature scaling, and statistical analysis.
- Achieved 83% model accuracy and visualized feature impact; emphasized predictive modeling and business insight.

CalgaryHacks 2025: WildBC; TypeScript, Next.js, React

- Co-developed a web application in a 24-hour hackathon to raise awareness of wildlife conservation in British Columbia in the context of climate change.
- Built an interactive map visualizing endangered species and wildfire locations with clickable insights to support public education and engagement.
- Implemented a timeline feature to track wildfire events over time, including incidents through 2025.
- Created an educational hub with videos, articles, quizzes, and leaderboards to encourage learning through interactive content.
- Designed a discussion board to support expert Q&A and community conversations, and integrated event listings for conservation workshops and outreach.

Production Analytics & Forecasting Dashboard; Python, Streamlit, statsmodels, Plotly, Azure AD, Microsoft Graph API

- Built an interactive analytics dashboard processing real North Sea production data (7 wells, 2008–2016), featuring ETS forecasting with 95% confidence intervals, rolling z-score anomaly detection, and KPI tracking with MoM/YoY comparisons
- Developed rolling-origin backtesting with MAE, RMSE, MAPE, and WAPE metrics; implemented seasonal naive baseline to benchmark model performance against production variability
- Integrated **Azure AD** (OAuth2 client credentials) and **Microsoft Graph API** for SharePoint file I/O with automatic token refresh, dual-mode architecture falling back to local filesystem when credentials are unavailable
- Designed a **Power Automate** workflow for weekly report distribution via Outlook, with scope-based error handling and admin notification on failure