FARDIN FARAZ MAHID

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EDUCATION

Bachelor of Science, Software Engineering **May 2026**
University of Calgary *Calgary, AB*
- **GPA:** 3.15
- **Coursework:** Database Design, Full-stack design, Operating systems, Network security, UI/UX design, Embedded Systems

Skills

- **Programming Languages**: C, C++, C#, Java, Python, JavaScript, TypeScript HTML, CSS, XAML
- **Security & Networking**: TCP/IP, HTTP, Proxy Servers, Endpoint Risk Assessment, FIDO Authentication, Secure Caching
- **Tools and environments**: Git, GitHub, Linux, Ubuntu Environment, WireShark, Web APIs, Debugging, Unit Testing
- **Databases & Data Tools**: MySQL, PostgreSQL, MongoDB, Firebase, SQL Server
- **Concepts and methodologies**: Network Security, FIDO, Object-Oriented Programming, Data Structures and Algorithms, Embedded systems design, 3D Modelling and Animation, Software Development Lifecycle (SDLC)
- **Other**: MS Suite (PowerPoint, Word, Excel)

WORK EXPERIENCE

Gantrail
Developer **Jun 2026**
- Engineered and enhanced 2+ production web applications using HTML, CSS, JavaScript, and React, expanding company marketing reach and increasing client engagement
- Integrated a server-side API function with Stripe webhooks and Resend to automate subscription payment receipts, reducing manual delivery and improving customer experience
- Synthesized business requirements and feedback from 5+ stakeholders into accessible, user-focused interface designs, improving navigation clarity and usability
- Diagnosed application issues and executed UI/UX improvements aligned with accessibility and usability best practices, reducing user-reported issues and rework by approximately 25%
- Orchestrated collaboration among technical and non-technical stakeholders across design, development, and management teams throughout the software development lifecycle, delivering reliable application updates on schedule

Edmasters Education
UI Designer and Developer **Oct 2025 - Nov 2025**
- Designed, developed, and enhanced 2+ production web applications using HTML, CSS, JavaScript, and React to support company marketing and client engagement initiatives
- Analyzed business requirements and feedback from 5+ stakeholders to translate needs into accessible, user-focused interface designs, improving navigation clarity and usability
- Implemented UI and UX improvements aligned with accessibility and usability best practices, reducing user-reported issues and rework by approximately 25%
- Collaborated with technical and non-technical stakeholders across design, development, and management teams to deliver reliable application updates on schedule

Ciptor IT Safe Canada
Software Developer **Jul 2025 - Dec 2026**
- Collaborated in Developing a full-stack EMS/EMR product with C# and .NET MAUI to adapt a foreign system to the Canadian healthcare market, ensuring compliance with local standards
- Engaged with healthcare professionals to identify gaps in existing EMS/EMR solutions, translating insights into software requirements that improved usability and compliance
- Developed and enhanced healthcare applications using C#, .NET, ASP.NET, .NET Core, Blazor, .NET MAUI, and Web APIs, applying object-oriented programming principles to support Canadian healthcare requirements

Software Intern **May 2023 - Aug 2023**
- Prepared RFQs/RFPs for IBM solutions under CSPV, enabling Ciptor IT Safe to sell IBM products in British Columbia and expand its market presence
- Conducted risk assessments to identify endpoint vulnerabilities, leading the client selecting Ciptor IT Safe as their cybersecurity vendor
- Created and presented PowerPoint decks on passwordless systems, encouraging shareholders to adopt FIDO technology in their infrastructure
- Analyzed branch finances using Excel to track monthly spending and proposed budget cuts, improving cost efficiency. Cut monthly costs by 10%

Extracurricular

AI Club **Oct 2025 - Present**
Embedded and Full-stack developer
- Developed and maintained internal calibration web applications using HTML, CSS, JavaScript, and Flask APIs to process and visualize user data for 20+ users, improving data accuracy and consistency across calibration sessions
- Collaborated with a team of 6+ developers and researchers to review code changes, improving overall system reliability and maintainability

Calgary To Space **Oct 2024 - Present**
Firmware and Software developer
- Developed Embedded C code for the cts-sat-1 satellite on an STM32 Nucelo board, readying it for low-earth orbit by October 2025
- Applied unit testing and test-driven development practices while adhering to codebase formatting standards and best practices, producing clean, maintainable firmware with minimal review revisions
- Consistently adhered to codebase formatting standards and best practices, ensuring clean, maintainable code with minimal review revisions. resulting in safer and faster code production

Nov 2024 - Jul 2025
Capstone (Bison Transmitter)
- Developed a satellite communication system using the PIC16 microcontroller and Embedded C to transmit data via ARGOS Web Services

- Ported Arduino/C++ code to Embedded C, ensuring compatibility with the PIC16 microcontroller for real-time data transmission
- Implemented AT command sequences to interface with the ARGOS KIM module, enabling satellite uplink and telemetry transmission
- Optimized low-power firmware for satellite communication, enhancing system efficiency and reliability
- Reduced production costs by 60% by utilizing cheaper but more efficient transmitter parts. Increased the lifespan of devices compared to commercial devices today by 1000% by utilizing lower-powered, cheaper electronic parts

PROJECTS

Computer Vision Benchmark **Apr 2026**

- Benchmarked 3 face detection algorithms (Haar Cascade, LBP Cascade, HOG+SVM) across 15+ hyperparameter configurations on the Yale Face Database to identify optimal detection settings
- Tuned Haar Cascade hyperparameters (scaleFactor, minNeighbors) to achieve perfect precision and recall at IoU ≥ 0.25, outperforming LBP and HOG+SVM baselines
- Built a custom IoU-based evaluation framework computing precision/recall across 3 overlap thresholds, enabling quantitative model comparison beyond visual inspection

Portfolio Website **May 2026**

- Developed an interactive personal portfolio website using JavaScript, HTML, CSS, and Vite, featuring responsive UI components and dynamic, persistent animations to create an engaging user experience.
- Integrated a public Web API to dynamically display external information within the application, using asynchronous requests and JSON parsing to support API-driven functionality.
- Implemented custom time-based rendering logic to simulate realistic day/night transitions, including animated celestial object movement, color interpolation, and synchronized visual effects.

Mobility Data Case Competition (Top 5) **Jan 2026**

- Led a spatial equity analysis by integrating ArcGIS Pro layers of designated stops, on-demand stops, and community-level population density, identifying largest underserved neighborhoods
- Cross-referenced open-source COLT ridership data with census age demographics to design a fixed-route extension projected to reduce on-demand dependency by ~90%
- Applied ArcGIS network analysis to propose an optimized bus corridor connecting GlenEagles to Downtown and major hubs, reducing car-dependency while increasing ridership of transit ~10% of Cochrane residents
- Developed a plan to deploy the analysis as an interactive web map using Leaflet.js and GeoJSON layers to enable stakeholders to dynamically filter routes, stops, and population density for data-driven transit planning.

Various OpenGL Projects **Apr 2025**

- Implemented a basic ray-tracing renderer in C++ using the OpenGL graphics API and Visual Studio 2022 to simulate light-surface interactions, including shadows and reflections
- Developed a 3D camera system with first-person navigation using the MVP (Model-View-Projection) Matrix

Flight Delay Prediction Model **Dec 2024**

- Built an ETL Machine Learning pipeline using PySpark to validate, clean and process a large flight dataset to predict weather-related delays.
- Applied Random Forest Classifier, achieving 88.35% accuracy and an AUC-ROC of 0.94, showing a high model reliability
- Automated batch preprocessing to support large-scale data ingestion and transformation

2ndChance App(Fullstack) **Nov 2024**

- Developed backend API endpoints using Express.js and Node.js to handle incoming and outgoing API requests, resulting in seamless data communication, which enhanced the app's reliability for user interactions
- Integrated MongoDB NoSQL database with the backend to efficiently store and retrieve user data, enabling personalized user experiences and supporting individuals in their journey to quit addictions

Social Media Project (Fullstack) **Apr 2024**

- Collaborated in developing the front end of a travel-based social media website by prototyping the front end using Figma. Helped develop the profile page and created a carousel function with CSS to display images from created itineraries
- Utilized Express.js to handle incoming and outgoing API requests and integrated Firebase's real-time database into the project's backend. Collaborated with teammates in creating NoSQL schema

Embedded Password System **Dec 2023**

- Developed an embedded system in C to process inputs for unlocking a mini-game, utilizing interrupts and UART for real-time feedback
- Led project meetings to ensure timely completion and foster collaborative problem-solving through task breakdowns
- Applied design patterns and modularized code for improved readability and scalability

Airline website Project (Fullstack) **Dec 2023**

- Developed a full-stack MVC website for tracking and booking flights using Java and Springboot with a React.Js frontend in a fast-paced team environment. Followed agile principles due to the scope of the project
- Implemented observer design pattern to update seat information after a booking. Used the observer pattern due to concerns about consistency and future scalability.
- Stored and parsed User and Airline data using MySQL in the backend. Ability to handle >1000 users concurrently
- Designed and created SQL Schema referencing the backend by normalizing tables up to 3NF. Removing redundancy in the Database

HTTP Web Proxy **Oct 2023**

- Developed an HTTP web proxy in C++ to connect with HTTP servers via TCP in an Ubuntu Linux environment, enabling efficient data transfer
- Implemented caching mechanisms to handle large images and videos while avoiding bloated cache sizes, and optimizing resource usage
- Achieved low latency of under 0.001s for medium to large sites, ensuring fast and reliable performance

Certifications

- Fortinet NSE 1-2-3 infoSec Certification
- .Net MAUI, AngularJS through .net Environments, web Developer bootcamp 2026