Mahmoud Bendari

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Education

University of Guelph Sept. 2025 – Apr. 2030
Bachelor of Engineering, Computer Engineering Co-op *Guelph, ON*

Technical Skills

Languages: C/C++, Python, TypeScript, JavaScript, Java, SQL, VHDL, HTML/CSS
Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, FastAPI, SQLAlchemy, Pydantic, Tailwind CSS
Databases & DevOps: PostgreSQL, pgvector, Redis, Alembic, Docker, GitHub Actions (CI/CD), Linux, Vercel
Tools & Testing: Git/GitHub, REST APIs, pytest, Vitest, Playwright, LLM APIs (Claude/OpenAI), Claude Code
Embedded & Firmware: Arduino, ESP32, PlatformIO, Adafruit Libraries, I2C, SPI, UART, PWM, ADC, GPIO
Hardware & CAD: KiCad, SolidWorks, AutoCAD, Cura, Soldering, Multimeter, Oscilloscope, Adobe Creative Cloud
IT & Systems: Windows 10/11, macOS, Microsoft 365, DNS, DHCP, TCP/IP, Router & Wi-Fi Setup, Remote Support
Soft Skills: Customer Service, Client Communication, Cross-Functional Teamwork, Problem Solving, Arabic

Experience

Software Engineering Intern June 2025 – Aug. 2025
Pearl Travel *Alexandria, Egypt (Hybrid)*

- Led the design and development of a full-stack B2C booking platform in React.js and Node.js that moved the agency's manual phone and email booking process online, successfully onboarding over 5,000 new user accounts after launch.
- Built backend REST APIs with Express.js on a PostgreSQL database with a Redis caching layer, cutting flight search query times by 40% and significantly reducing manual processing time per booking for the agency's travel agents.
- Worked directly with management and stakeholders in Agile sprints to redesign and simplify the UI/UX checkout flow, improving overall user retention and directly contributing to $20,000 in new online booking revenue for the agency.

Founder & IT Support Technician Jan. 2025 – Sept. 2026
Digital Fixers *Guelph, ON*

- Provided on-site and remote IT help desk support for numerous home clients, setting up routers and DNS, fixing Wi-Fi drops, OS errors, and printers, and logging every job in Google Sheets to track fixes and follow-ups.
- Optimized numerous slow Windows and macOS machines through malware removal, SSD/RAM upgrades, driver updates, and clean OS installs, cutting boot and load times by up to 50% and extending the life of older hardware.
- Built the company website and local marketing with HTML/CSS/JS, growing online visibility by 90% and bringing in new repair and IT support clients, while turning client feedback into clear service requirements and pricing.
- Ran the business solo, handling quoting, scheduling, and supplier orders with Excel cost models to keep 100% parts availability and clear repair timelines for every client, while balancing full-time studies and a part-time job.

Projects

CoopRadar | *Full-Stack Software Engineer* Oct. 2026 – Present

- Architected a full-stack co-op job aggregator using React, TypeScript, and FastAPI, ingesting 13,700+ live postings from 1,700+ employer career boards (Greenhouse, Lever, Workday) and Job Bank Canada every 6 hours.
- Engineered a SQL resume-matching engine in PostgreSQL that parses PDF/Word resumes and scores every open posting using full-text search, array overlap, and pgvector, holding p95 latency under 300 ms on 10,000 postings.
- Integrated a bring-your-own-key AI layer wrapping the Claude, OpenAI, and Gemini SDKs with Server-Sent Events streaming to generate resume reviews, tailoring plans, and cover letters while never storing user API keys.
- Automated CI/CD with GitHub Actions and Docker across 530+ tests (pytest, Vitest, Playwright) and strict type checks, deploying to Render, Neon, and Vercel using spec-driven, agentic development with Claude Code.

EcoLens (GenAI Genesis Hackathon) | *Software Engineer* Mar. 2026

- Architected the EcoLens full-stack application alongside a 3-person engineering team, letting users scan grocery items and instantly see each product's hidden environmental externality cost, built, tested, and demoed in 48 hours.
- Engineered a rapid Python data pipeline utilizing REST APIs to parse complex product component datasets, calculating real-time sustainability metrics and streaming JSON responses to drive eco-conscious consumer decisions.

Dual-Axis Solar Tracker | *Embedded & Firmware Developer* June 2026 – Aug. 2026

- Designed and wrote C++ firmware for an Arduino Nano ESP32 to dynamically control dual servo motors via PWM, processing analog light sensor inputs to maximize energy capture efficiency by up to 30% throughout the day.
- Engineered PCB schematics in KiCad and a 3D-printed chassis in SolidWorks, and debugged power and noise issues.