ATAHAR IMTIAZ

British Columbia, Canada · imtiaznasif@gmail.com · +1-587-897-6748 · GitHub · LinkedIn · Portfolio

EDUCATION

University of British Columbia — British Columbia, Canada
B.Sc. in Computer Science — December 2025

TECHNICAL SKILLS

- **Languages:** TypeScript, JavaScript, Java, Python, C#, PHP, R, C, HTML, CSS
- **Computer Science Fundamentals:** Data Structures & Algorithms, algorithm design & complexity analysis (Big-O), object-oriented design, problem solving
- **Computer Architecture:** MIPS assembly (MARS simulator), digital logic design, CPU/datapath & control design, memory hierarchy, low-level systems programming
- **Frameworks & Libraries:** NextJS, React, NodeJS, NestJS, Express, Vue, Spring Boot, Socket.IO, ThreeJS, GSAP, Prisma, Drizzle ORM
- **AI / ML Engineering:** LLM integration (Anthropic Claude, OpenAI, Gemini APIs), prompt engineering, retrieval-augmented generation (RAG), vector embeddings, semantic search, pgvector, HNSW indexing, agent orchestration, streaming LLM responses, structured output extraction
- **API & Integrations:** RESTful API design & consumption, GraphQL, third-party API integration (Clerk, UploadThing, EmailJS, OAuth providers), JWT authentication, Role-Based Access Control (RBAC)
- **Databases & Caching:** SQL, PostgreSQL, MySQL, MongoDB, Redis, schema design, query optimization, caching strategies, CDN
- **Cloud, DevOps & Infrastructure:** AWS, S3, CloudFront, App Runner, ECR, Docker, Docker Compose, Nginx, GitHub Actions (CI/CD), SSL/TLS termination, containerized deployment, Vercel
- **Systems & Linux:** Linux CLI & Bash scripting (navigation, process/service management with systemctl, log inspection, networking with ssh/curl/netstat), cron, package management
- **Data Analysis & Visualization:** Python (Pandas, NumPy, Matplotlib), R (data visualization, statistical & machine learning modeling), data cleaning & wrangling, exploratory data analysis, statistical summarization, chart/plot generation
- **Testing & QA:** Vitest, React Testing Library, Jest, Playwright, Postman, unit/integration/E2E testing, test planning, coverage enforcement, CI quality gates
- **UI/UX Engineering:** Tailwind CSS, shadcn/UI, Figma, WCAG accessibility, SEO fundamentals, responsive design, component-driven architecture, cross-browser compatibility
- **Methodologies:** Agile/Scrum (sprint planning, standups, backlog grooming, retrospectives), Git branching strategies, code review, pull request workflows, technical documentation

PROJECTS – RELEVANT EXPERIENCE

MASHER – TA Allocation & Management System | *Capstone Project* | Next.js 14, React, TypeScript, Tailwind CSS, NextAuth (JWT), Drizzle ORM, PostgreSQL, Redis, Nginx, Docker/Docker Compose, Vitest, React Testing Library — May 2025 - August 2025

- Eliminated 100% of manual spreadsheet/email TA-matching workflows by building a role-based full-stack platform (Admin, Coordinator, Instructor, Student) with RBAC-enforced authentication, reducing coordinator overhead by an estimated **8+** hours per allocation cycle; core workflows included student applications with ranked preferences, instructor TA requests, and a calendar-based drag-and-drop scheduler with real-time conflict detection across **200+** time slots.
- Boosted performance by **~40%** (P95 page load) via Redis caching on high-read allocation queries, fully containerized Docker Compose deployment, and Nginx reverse proxy with SSL/TLS termination; automated CI/CD via GitHub Actions with under 2-minute production feedback loops.
- Delivered audit-grade operational tooling and CSV/PDF reporting, structured audit logs, and notifications which are backed by **94%** test coverage across auth, permissions, and scheduler flows via Vitest + React Testing Library, enabling zero-regression deploys.

Know Me - AI Conversational Memory Agent | *Personal Project* | TypeScript, NestJS, Node.js, PostgreSQL, pgvector, LangChain, LangGraph, Anthropic Claude API, OpenAI Embeddings API, Socket.IO, Docker, REST APIs, Vitest

- Built a full-stack AI agent with long-term semantic memory and cross-session recall using a LangGraph pipeline (Extract → Store) that pairs Claude (Haiku for JSON entity extraction, Sonnet for streaming chat), cutting extraction cost **~25x** vs. a single-model approach.
- Engineered a RAG layer on PostgreSQL + pgvector with a **1536-dim** HNSW index (**cosine, m=16, ef_construction=64**), hitting **43–63ms** semantic search latency (**4x** faster than target) with Row-Level Security for per-user isolation.
- Delivered token-by-token streaming over WebSockets (Socket.IO) with parallelized context assembly (Promise.all) and async background extraction; Dockerized for one-command setup with **66 Vitest tests across 10 suites**.

ParseCraft - AI Document Analysis Platform | *Personal Project* | Next.js, React, Java, Spring Boot, AWS S3, CloudFront, App Runner, ECR, Docker, REST APIs, Gemini API

- Built and deployed a full-stack AI document analysis platform (Next.js + Spring Boot) where users upload PDF, DOCX, or TXT files and receive tone-aware summaries rewritten in their chosen voice - formal, casual, or bard-style prose- with the model detecting and explaining the document's tone before rewriting it.
- Deployed end-to-end on AWS (S3 + CloudFront for frontend, App Runner + ECR for containerized backend), handling environment configuration, CORS, and production troubleshooting to ship a live, publicly accessible application.

ACHIEVEMENTS

- **C² Hacks 2nd Place (Competitive Hackathon):** Out of **40+ teams**, placed **2nd** by re-engineering Instagram's social graph as a real-time disaster-response network by shipping SOS alerts to friend lists and an emergency resource locator within a **36-hour** build window.
- **Outstanding International Student Scholarship - UBC:** Merit-based award granted to top-performing international applicants at time of admission; recognizes academic excellence and demonstrated technical achievement.

LEADERSHIP

UBC Coding Club — University of British Columbia
VP Events — September 2024 - April 2025

- Planned and executed a semester-long calendar of 15+ technical workshops, hackathons, and guest lectures. Managed venues, AV, catering contracts, and volunteers end-to-end, while driving attendance through in-class presentations and social media campaigns, resulting in consistently high turnout and an 80% membership growth over the year.