ALIM DHUKA

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Education

University Of Waterloo   **August 2023 – Present**
Bachelor of Mathematics in Computer Science(Co-op)   *Waterloo, ON*
- **Award:** President's Scholarship of Distinction.
- **Relevant Coursework**: Object-Oriented Programming, Data Structures and Algorithms, Computer Organization and Architecture, Compilers, Tools and Techniques for Software Development.

Experience

Cognixion   **May 2025 – Aug 2025**
Software Engineer Intern   *Toronto, ON*
- Designed and deployed an **Agentic AI** system for BCI-AR, enabling real-time neuro-assistive communication.
- Reduced command latency by **75%** using AWS deployment and DynamoDB caching, improving session responsiveness.
- Boosted accuracy & minimized hallucinations through Graph-RAG with LangChain and Graphiti multi-session context.
- Built **25+ MCP-based** integrations enabling agents to connect various applications for real-world task execution.
- Created a multi-layer **Memory system** with Semantic, Episodic, and Procedural recall for adaptive agent behavior.
- Expanded accessibility for ALS patients by integrating Anthropic Computer Control with AppleScript MCP interface.
- Documented agent behavior and architecture to ensure scalability, reproducibility, and compliance across projects.

Consuy Inc.   **Aug 2024 – April 2025**
Software Engineer Intern   *Calgary, AB*
- Built an AI ticketing system for **100+** clients, cutting operational costs and streamlining support efficiency.
- Implemented RAG with LangChain and OpenAI embeddings, raising response accuracy by **85%** on support tickets.
- Developed agentic architecture enabling multi-modal context handling and advanced execution of customer-facing tasks.
- Lowered ticketing costs by **50%** with ML-driven triage, enrichment, and automated workflows across business teams.
- Auto-generated AI plugins for APIs, frameworks, and cloud services to accelerate product integration and adoption.
- Integrated chatbot automation using Azure Service Bus and WebSockets, improving reliable real-time communication.

Iter Innovandi   **Aug 2024 – Dec 2024**
Full Stack Developer Intern   *Toronto, ON*
- Built a secure authentication system using Firebase, supporting enterprise-scale login & registration workflows reliably.
- Boosted system performance by **80%** with lazy loading, code splitting, and RESTful API performance optimizations.
- Automated Cypress E2E tests, cutting production defects & accelerating continuous delivery cycles across deployments.
- Collaborated with developers to design scalable frontend-backend workflows, improving product quality

Projects

Breast Cancer Detection using Machine Learning | *Python, TensorFlow, Keras*   **Dec 2024**
- Developed a Deep learning model using **CNN** to detect breast cancer from **10,000+** histopathology images
- Implemented the model using TensorFlow and Keras, optimizing hyperparameters for high precision and recall.
- Achieved **99%** accuracy using metrics like ROC curve, precision, recall, and F1 score.

Task Management Application | *Angular 15+, Node.js, Express.js, OpenRouter*   **Nov 2024**
- Built a responsive task management app with CRUD features using Angular.
- Integrated LLMs via OpenRouter API for task categorization and dependency tracking.

E-commerce Platform (Freelancing) | *MERN*   **Aug 2024**
- Developed an e-commerce platform with React.js and Next.js for a dynamic and responsive UI.
- Implemented RESTful APIs using Node.js and Express.js for efficient backend communication.

Technical Skills

Programming Languages: Python, Java, C/C++, JavaScript, SQL, HTML, CSS
Frameworks & Libraries: React.js, Tailwind CSS, Flask, FastAPI, LangChain, LangGraph, OpenAI Agents SDK
AI/ML: Agentic AI Orchestration, RAG, MCP, Deep Learning, CNNs, Machine Learning Pipelines
Cloud & Tools: AWS, Azure, Azure OpenAI, Docker, Jenkins, Firebase, Git, PostgreSQL, MongoDB
Core Competencies: OOP, Asynchronous Programming, API Design, Frontend & Backend Development.