Kareem Arab

Full Stack Engineer | me@*kareemarab.com* | Ottawa, Canada (Remote)

Technical Expertise

- **Languages:** Python, Go, Swift, TypeScript, JavaScript, LaTeX
- **Frameworks/Technologies:** React, NextJS, iOS, Serverless, Kubernetes, CI/CD, Firebase, Plaid, Stripe, REST APIs, GraphQL
- **AI/ML:** TensorFlow, PyTorch, Natural Language Processing
- **Cloud & Databases:** AWS, GCP, Azure, Vercel, MongoDB, Redis, Firestore, MySQL
- **DevOps & Methodologies:** Docker, Terraform, Agile, Scrum, Kanban, Test-Driven Development (TDD)

Work

Amadeus, Full Stack Engineer, Mar 2021 - Present

- Contributed to cloud migration from on-prem & GCP to Azure, improving scalability and reducing operational costs
- Collaborated on implementing a robust MFA system, enhancing security for millions of users
- Assisted in migration to Kubernetes, contributing to 99.99% uptime and reduced database load
- Actively participated in incident management, helping to improve MTTR through enhanced processes
- Supported junior engineers and contributed to Agile ceremonies, fostering team productivity

Neurovine, Founding Software Engineer, Apr 2019 - Feb 2021

- Developed high-performance, HIPAA-compliant serverless APIs on AWS Lambda for mobile and research platforms
- Worked on integrating real-time ML inference models to aid patient concussion recovery
- Contributed to low-latency Bluetooth communication for wearable EEG devices, improving data accuracy
- Implemented end-to-end encryption and HIPAA compliance measures, ensuring data protection and privacy

Notable Projects

- **Principal:** AI-driven wealth management platform. First Place Fintech Product on ProductHunt. Tech: Go, React, ML
- **SPC x OpenAI Hackathon:** Developed an AI tool for reducing online polarization using NLP and GPT models
- **Handshake:** Real-time group chat iOS app with event management. Tech: Swift, Firebase, WebSockets
- **RP:** High-performance HTTP proxy with LRU cache. Tech: Python, Multithreading
- **Neural Network Implementations:** Custom implementations of various neural network architectures
- **Adversarial ML Research:** Analyzed impact of adversarial attacks on CNN latent spaces

Research

IoT Lab @ Carleton University, Research Assistant, 2017 - 2019

- Conducted ML research for smart grid energy systems, resulting in 2 published conference papers
- Developed an ML-based diabetes management tool
- Built real-time multi-modal data streaming system using Raspberry Pi and IBM Cloud
- Mentored multiple 4th-year capstone projects, fostering innovation in IoT applications

Education & Achievements

Carleton University, B.Sc. in Computer Science, Spring 2020

- Shopify Build Things Hackathon App Award (2018): Most innovative iOS app
- Published researcher: Google Scholar Profile

Agentic problem-solver with a track record of delivering high-impact, scalable solutions in full-stack engineering