

Kareem Arab

Full Stack Generalist | me@kareemarab.com | Ottawa, Canada — Remote

Technical Skills

- Languages: Python, Go, Swift, TypeScript, L^AT_EX
- Frameworks/Technologies: React, NextJS, iOS, Serverless, K8s, CI/CD (Jenkins, GitHub Actions, etc.), Firebase, Plaid
- Libraries: TensorFlow, UIKit, Tailwind, PyTorch (elementary proficiency)
- **Cloud Platforms:** AWS, GCP, Azure, Vercel; **Databases:** MongoDB, Redis, Elasticsearch, Firestore, MySQL

Experience

Amadeus, Full Stack Engineer, Mar 2021 - 2024

- Supported infrastructure transition from On-prem & GCP to Azure, optimizing operational efficiency.
- Contributed to the design and implementation of a new MFA system, improving user security.
- Played a key role in service migration to Rancher K8s, improving deployment reliability and reducing database load.
- Extensive experience in incident management, improving system recovery processes and documentation.
- Assisted in onboarding new engineers and facilitated team meetings, improving team integration and efficiency.

Neurovine, Founding Software Engineer, Apr 2019 - Feb 2021

- Developed secure serverless APIs on AWS Lambda, enhancing mobile and research platform efficiency.
- Led the integration of ML models into the platform, introducing real-time inference to aid w/ patient concussion recovery.
- Implemented HIPAA compliance standards, ensuring data protection and privacy.
- Worked on low-level Bluetooth communication software for wearable EEG hardware.

Projects

- **Principal:** Financial management platform designed to centralize, simplify, and empower users' financial oversight.
- **SPC x OpenAI Hackathon:** Co-created a tool that identifies polarizing tweets related to highly contentious issues and drafts responses with a focus on evidence-based de-escalation methods to reduce polarization and partisan animosity.
- **Handshake:** Real-time group chat application with integrated event management, developed u/ iOS and Serverless.
- **RP:** Designed and implemented a multithreaded HTTP proxy with an LRU cache using Python.
- **Neural Network Impl.:** Hopfield, RBF, and convolutional neural network impl. u/ Python and TensorFlow.
- **Adversarial Attacks:** Conducted analysis on the impact of Gaussian and Carlini-Wagner adversarial perturbations on the latent space of convolutional neural networks.

For more projects, visit [github](#).

Research

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

- Conducted research focused on the application of machine learning in smart grid energy systems.
- Led the development of a diabetes self-management tool.
- Developed a multi-modal data streaming system, enhancing data collection and analysis capabilities.
- Advised multiple 4th-year capstone projects.

For publications, visit [scholar](#).

Education

Carleton University, Bachelor of Computer Science (BSc), Spring 2020

Achievements

- Awarded the Shopify Build Things Hackathon App Award, Nov 2018, for the most innovative iOS app.