

Kareem Arab

Full stack generalist
me@kareemarab.com
Ottawa, Canada — Remote

languages PYTHON — GO — SWIFT — TYPESCRIPT — ~~LT_EX~~

frameworks/technologies React — NextJS — iOS — Serverless — REST APIs — Websockets — Kuberentes — CI/CD (Jenkins, Actions, etc.) — Firebase — **Plaid**

libraries Tensorflow — UIKit — Tailwind — ReactQuery — PyTorch (elementary proficiency)

cloud platforms GCP — AWS — Azure — Vercel

databases MongoDB — Redis — Firestore — MySQL

processes Kanban — Agile — Scrum

work experience **AMADEUS** — Full Stack Engineer

Mar 2021 - present

- Collaborated with cross-functional teams to plan and implement the migration of our Guest Management Solutions infrastructure from **On-prem & GCP** to **Azure**.
- Collaborated on the design and implementation of a new **Multi-Factor Authentication (MFA)** system, enhancing account security for users.
- Successfully migrated multiple services to **Rancher k8s** with caching, resulting in self-healing deployments and improved capacity and reduced database load for Black Friday.
- Designed, built and tested highly performant **APIs**.

NEUROVINE — Software Engineer

Apr 2019 - Feb 2021

- Developed secure **Serverless APIs** built on **AWS Lambda** in **Python** that drove our mobile app as-well as our research and data-science pipelines.
- Worked on low-level bluetooth communication software for our wearable EEG headset.
- Shipped a mobile app & a research portal built w/ **Ionic**.
- Worked closely with the data science team to integrate **ML** models into the platform.
- Implemented **HIPAA** compliance requirements across our systems/designs.

projects - Realtime financial aggregation & search — *React & Go + Plaid*

present

- Realtime group chat w/ built-in event management — *iOS (Swift) & Serverless →*

2020-2022

- Multithreaded HTTP Redis proxy w/ an LRU cache — *Python →*

2022

- Hopfield, RBF & Conv. Neural network implementations — *Python & TensorFlow →*

Summer 2020

- Analyzing Gaussian & adversarial perturbations on a CNN's latent space →

Winter 2020

More **projects** on **github**.

research **IOT LAB @ CARLETON UNIVERSITY**

2017 - 2019

Research assistant

- Conducted research on ML model applications for Smart Grid energy systems.
- Built a real-time multi-modal data streaming system using a Rasp. Pi and IBM Cloud.

DIABETES COACH (MACADAMIAN—IOT LAB)

Winter 2018

- Type II diabetes self management tool.

education **CARLETON UNIVERSITY**

Spring 2020

Bachelor of Computer Science (BSc)

achievements **SHOPIFY — BUILD THINGS APP AWARD**

Nov 2018

Winner of the best App award @ Shopify's Build Things App Showcase.

publications ** List of **Publications** on **Scholar**.