# Kareem Arab

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**languages** — **PYTHON — JAVA — SWIFT — TYPESCRIPT — GO (ELEMENTARY PROFICIENCY)**

**frameworks and technologies** — **iOS — XCode — Realm — NextJS — React — Serverless — GCP — AWS — K8s — Helm — Docker — Vault — CI/CD (GH Actions, Jenkins, Spinnaker) — TensorFlow — MySQL — Redis — DynamoDB — Ionic — Firebase — Rancher — Splunk — Latex**

**processes** — **Kanban, Agile & Scrum**

## work experience

**AMADEUS** — *Mar 2021 - present*
*Full Stack Engineer*
- Help develop and integrate **Multi-Factor Authentication (MFA)** into an existing authentication service, enhancing account security for users.
- Developed and executed multiple service migration to **Rancher k8s** + **caching**, resulting in self-healing deployments, increased capacity and reduced database load for Black Friday (result: success/no prod issues).
- Mitigated xss attacks by developing an end-to-end reporting solution.
- Led **scrum & grooming** sessions, pushing multiple features into the development pipeline + **onboarding** new engineers.
- Worked w/ a **hybrid** system architecture (on-prem servers & **GCP**)

**NEUROVINE** — *Apr 2019 - Feb 2021*
*Software Engineer*
- Developed **APIs** built on **AWS Lambda** (serverless) in **Python** that drove our mobile and research portal apps. It also drove our internal data-science pipeline.
- Shipped a consumer mobile app & a research portal built w/ **Ionic**.
- Collaborated w/ the Data Science team to build a **real-time ml** pipeline.
- Helped implement **HIPAA** requirements across our systems.

## education

**CARLETON UNIVERSITY** — *Spring 2020*
Bachelor of Computer Science (BSc)

## projects

**PRINCIPAL** — *present*
- Financial management tool for small businesses. Stack: Go & React

**HANDSHAKE** — *2020-2022*
- Private real-time group chat w/ built-in event management. Stack: iOS - Swift & Serverless - Typescript

**RP** — *2018*
- A multithreaded HTTP Redis proxy server w/ an LRU cache.

**GUASSIAN/CARLINI-WAGNER ADVERSARIAL ATTACKS** — *Winter 2020*
- Gaussian & Adversarial Perturbations on a CNN's input space.

**NEURAL NETWORKS** — *Summer 2020*
- A collection of neural network implementations built u/ **TensorFlow**.

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

## research

**IOT LAB @ CARLETON UNIVERSITY** — *2017 - 2019*
*Undergraduate Researcher*
- Conducted research on the best ml model applications on Smart Grid energy data.
- Built a real-time multi-modal data streaming system using a Rasp. Pi & IBM Cloud.

**DIABETES COACH (MACADAMIAN—IOT LAB)** — *Winter 2018*
- Type II diabetes self management tool.

## achievements

**SHOPIFY — BUILD THINGS APP AWARD** — *Nov 2018*
*Winner of the best App award @ Shopify's Build Things App Showcase.*

## publications

**AI FOR DIABETES MELLITUS TYPE II: FORECASTING AND ANOMALY DETECTION** — *2019*
*Author — IEEE Wireless Communications and Networking Conference*

** More **publications** on ***Scholar***.