Kareem Arab

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

languages PYTHON — GO — SWIFT — TYPESCRIPT — LATEX frameworks/technologies React — NextJS — iOS — Serverless — REST APIs — Webhooks — Websockets — Kuberentes — CI/CD (Jenkins, Actions, etc.) — Firebase — Terraform — Vault — Plaid Tensorflow — UIKit — Tailwind — ReactQuery — PyTorch (elementary proficiency) libraries cloud platforms AWS — GCP — Azure — Vercel MongoDB — Redis — Elasticsearch — Firestore — MySQL databases Kanban — Agile — Scrum processes work experience **AMADEUS** — Full Stack Engineer Mar 2021 - present - Worked on modernizing outdated arch. & migrating legacy systems to the cloud. - Helped plan and implement infrastructure migration from **On-prem & GCP** to **Azure**. - Aided in the design of a new MFA system, enhancing account security for millions. - Successfully migrated multiple services to Rancher k8s with caching, resulting in selfhealing deployments and improved capacity and reduced database load for Black Friday. - Designed, built and tested highly performant APIs. - Extensive on-call experience, leading efforts to recover from sev 1-3 incidents. - Led standups & planning sessions, pushing multiple features into the dev pipeline + onboarding new engineers. **NEUROVINE** — Start up — 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 - PRINCIPAL — React & Go present • Developed a full-stack web application using a **Go REST API** and a **React** frontend. • Integrated with the **Plaid API** to consume real-time financial data. • Created a search engine using **Elasticsearch** to index and search thru transactions. • Implemented a caching layer using **Redis** to reduce the number of API calls to Plaid. • Implemented a webhook system to verify and tunnel webhook requests from Plaid to the backend where they're processed u/ Redis-backed background workers. - 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. IOT LAB @ CARLETON UNIVERSITY research 2017 - 2019 Research assistant - Conducted research on ML applications for Smart Grid energy systems. - Built a real-time multi-modal data streaming system using a Rasp. Pi and IBM Cloud. - Published two conference papers. - Worked on a Type II diabetes self management tool project. education **CARLETON UNIVERSITY** Spring 2020 Bachelor of Computer Science (BSc)

Nov 2018

publications ** List of Publications on Scholar.

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achievements