OMKAR KAKADE

✉ omkar.kakade@gmail.com
🌐 o-kakade.github.io
in omkarkakade
○ o-kakade

Skills

TOOLS
Git
Bash
Docker
Nginx

AI/ML
Tensorflow
PyTorch
Pandas
Numpy
Scipy
Matplotlib
OpenCV
spaCy
scikit-learn

DATABASES
SQL
MySQL
SPARQL
Blazegraph
AWS Neptune

CLOUD
Microsoft Azure
Amazon Web Services - AWS
Google Cloud Platform - GCP

LANGUAGES
JavaScript
Python
TypeScript
Java

WEB
Nest.js
Flask
HTML
Spring
CSS
Angular

Certifications

AWS Certified Solutions Architect - Associate	2019 - 2022
AWS Certified Developer - Associate	2020 - 2023
AWS Certified SysOps Administrator - Associate	2020 - 2023

Education

Rochester Institute of Technology Master of Science Computer Science GPA : 3.64	Aug. 2017 - Dec. 2020
University of Pune Bachelor of Engineering Computer Engineering	Aug. 2012 - May 2016

Experience

Software Engineer — Somerville, MA
Motorola Solutions — Nov. 2021 - Current

- **CAPE Drone Video & Flight Control** - Built a highly demanded feature for managing groups of viewers on a livestream (Watchgroups) impacting 3 cities that use the product for public safety. (*Python, Typescript, Angular, Django, PostgreSQL, Firestore, GCP*)
- Integrated CAPE with real-time situational awareness service (Aware) by syncing drone location and livestream video data to enhance effectiveness of first responders while responding to a live incident. (*Python, Django, Azure EventHub*)
- Migrated frontend of the application from Angular 9 to 13 bringing security updates to the application and reducing vulnerabilities by 30% and decreasing load times by any average of 54%.
- Built a custom logging module for the backend and a microservice to send logs to Kibana to enhance application monitoring and faster debugging when errors occur in production. (*Python, Django, Celery*)

Software Engineer - AI/ML — Boston, MA
Bola AI — Feb. 2021 - Oct. 2021

- **Voice Enabled Dental EHR System** - Designed and deployed cloud based infrastructure to scale Bola backend and support 3x growth of users. (*Azure, Docker, NGINX, App Gateway, Prometheus, Grafana*)
- Built CI/CD pipelines with configuration scripts on VMs to enable reliable deployment and release cycles, boosting engineering team productivity with sub 10 minutes deployment. (*Github Actions*)
- Developed a custom speech model in collaboration with Deepgram and integrated it with the backend to decrease response times - 2x faster, scale with 58% more cost efficiency and increase intent accuracy by 10% for users improving overall experience. (*Deepgram ASR, Typescript, Python*)
- Built tool to automate KPI workflows carried out by business team saving atleast 30+ hours per week on data triaging and analysis. (*Python, Azure SDK, Pandas*)
- Implemented feature toggling in the backend to conduct beta testing with live traffic, increasing reliability for new feature releases. (*Typescript, Nest.js, WebSockets, Angular, Electron, Sentry*)

Machine Learning Engineer — Orlando, FL
Siemens — Jan. 2020 - May 2020

- **Internal Predictive Analytics Platform** - Configured *RStudio Server Pro* with *NGINX* reverse proxy enabling a cloud based model development space.
- Built training and inference *Docker* images for custom R based time series forecasting use cases to enable scalable model training and model deployment.
- Developed python scripts using *Sagemaker SDK* for deploying models using batch transform to serve predictions on-demand enabling 64% cost savings relative to deployment using always-on model endpoints.

Software Developer — Orlando, FL
Siemens — May 2019 - Dec. 2019

- **Search Application for Knowledge Graph** - Developed RESTful API for a keyword recognition based serverless search application to provide answers to user's questions from a *RDF graph database* in AWS. (*Python, Java, spaCy, Apache Jena, Flask, Springboot, AWS Lambda, API Gateway, Neptune, S3, Angular*)
- Designed and developed all modules with OOP from scratch such as Orchestrator, Keyword Recognizer, Indexer, Query Builder, Query Executor.
- **Database Migration** - Migrated production dump of graph database from Blazegraph to AWS Neptune to mitigate security concerns and move to a cloud based RDF triple store.
- **Cloud Resource Management** - Implemented API for a resource scheduler tool with features such as auto start-shutdown for a total cost saving of 87% relative to always-on EC2.

Projects

Performance and Deployment of Deep Neural Net on Edge Devices — 2020

- Deployed InceptionNet and MobileNet on Raspberry Pi 4 while measuring performance on metrics like accuracy, file size, CPU and Memory usage, latency. (*Python, TF-Lite*)
- Improved performance across all metrics while maintaining accuracy using techniques like quantization, weight clustering and weight pruning.

Multi-core, Cluster, GPU and Map-Reduce Projects - https://bit.ly/2IJBf8B — 2018

- Developed parallel computing programs to solve large mathematical problems demonstrating strong scaling and weak scaling. (*Parallel Java 2, Java, C*)