OMKAR KAKADE

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Skills

LANGUAGES

Python
TypeScript
JavaScript
Java

WEB

Django
Angular
Celery
Nest.js

STORAGE

PostgreSQL
SQL
Firebase
AWS Neptune
SPARQL
S3

CLOUD

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

AI/ML

PyTorch
Tensorflow
Pandas
Numpy
Scipy
Matplotlib
OpenCV
spaCy
scikit-learn

TOOLS

Docker
Nginx
Redis
Prometheus
Grafana
Git

Certifications

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

Experience

Senior Software Engineer — Vancouver, CA
Motorola Solutions — Feb. 2024 - Current

- Full-Stack SWE on CAPE, a drone video livestreaming & remote control platform. [Product Link]
- Lead infrastructure and security compliance for CAPE with **99.95% Service Level Objective (SLO)**.
- Developed an auto-update mechanism for Android apps, reducing update times by 3x.
- Built an asynchronous flight data processing **microservice,** reducing processing time by 92x & enabling immediate session availability for enhanced UX. (**AWS Lambda, S3, Celery, Redis, Kibana**)
- Cross function work - Collaborated with and worked on the Video Services team to deploy services to secure **Azure GovCloud** environment in the Canada region improving multi-region availability.

Software Engineer — Somerville, MA
Motorola Solutions — Nov. 2021 - Feb. 2024

- Developed features for CAPE like Livestream Viewer Management, Mission Planning, Public Livestreaming Capability, Pilot Management resulting in 5x customer growth.
- Integrated drone live streams and location with Motorola services, enhancing ecosystem functionality and improving customer satisfaction by enabling seamless access within a single platform. [Press Release] (**Python, Django, Redis, Celery, Azure EventHub**)
- Migrated frontend to **Angular** 13, reducing vulnerabilities by 30% & improving load times by 54%.
- Built Docker containers for local development, cutting setup time by 25x. (**Docker, Django, Angular, PostgreSQL, Redis, Nginix**)

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

- <u>**Voice Enabled Dental EHR System**</u> - Designed scalable cloud infrastructure to support a 3x growth in users. (**Azure, Docker, NGINX, AppGateway, Prometheus, Grafana, Nest.js, WebSockets, Sentry**)
- Built CI/CD pipelines, reducing deployment time to under 10 minutes. (**Github Actions**)
- Developed a custom speech model improving response time and accuracy by 10% while reducing costs by 58%. (**Deepgram automatic speech recognition, Docker, CUDA, Typescript, Python**)

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

- <u>**Internal Predictive Analytics Platform**</u> - Built Docker images for custom R-based time series forecasting models, improving scalability.
- Reduced model deployment costs by 64% using batch transforms. (**AWS Sagemaker**)

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

- **Search Application for Knowledge Graph** - Developed a RESTful API for a serverless search app using AWS, Graph Database and NLP techniques. (**Python, Java, spaCy, Apache Jena, Flask, Springboot, AWS Lambda, API Gateway, Neptune, S3, Angular**)
- Implemented cloud resource management API, saving 87% in **EC2** costs.

Education

Rochester Institute of Technology — Aug. 2017 - Dec. 2020
Master of Science Computer Science

University of Pune — Aug. 2012 - May 2016
Bachelor of Engineering Computer Engineering

Projects

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

- Deployed InceptionNet and MobileNet on Raspberry Pi 4, optimizing for accuracy, CPU/memory usage, and latency using techniques like quantization, weight clustering and weight pruning. (**Tensorflow**)

Multi-core, Cluster, GPU and Map-Reduce Projects — 2018

- Developed solutions for large-scale mathematical problems using multi-core, cluster, GPU, and Map-Reduce techniques. [Link] (**Parallel Java 2, Java, C, CUDA**)