

# OMKAR KAKADE

o-kakade.github.io  
in omkarkakade  
o-kakade

## 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  
Motorola Solutions  
Vancouver, CA  
Feb. 2024 - Current

- Full-Stack SWE on CAPE, a low-latency P2P drone video & control platform. [Product Link]
- Lead infrastructure and security compliance for CAPE with 99.95% SLA.
- Developed an auto-update mechanism for Android apps, reducing update times by 3x.
- Built a log-processing microservice for asynchronous flight data processing, improved UX by immediate session availability & reduced processing time by 92x. (AWS Lambda, S3, Celery, Redis, Kibana)
- xFN task - Collaborated with the Video Services team to deploy services to secure Azure GovCloud environment in the Canada region.

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

- Developed features for CAPE like Viewer Management & Mission Planning, resulted in 5x customer growth.
- Integrated drone live streams with internal services, enhancing ecosystem functionality. [Press Release] (Python, Django, 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  
Bola AI  
Boston, MA  
Feb. 2021 - Oct. 2021

- Voice Enabled Dental EHR System - 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 ASR, Typescript, Python)

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

- Internal Predictive Analytics Platform - 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  
Siemens  
Orlando, FL  
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)
- Cloud Resource Management - Implemented cloud resource management API, saving 87% in EC2 costs.

## Education

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

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

## 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)