Ameya Khot

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EDUCATION

Texas A&M University - Kingsville — Kingsville, TX
Master of Science in Computer Science — *Aug. 2022 – Aug. 2024*

University of Pune — Pune, India
B.E. Computer Engineering — *May. 2019*

PROFESSIONAL EXPERIENCE

Texas A&M University - Kingsville — Kingsville, TX
Graduate Research Assistant, Quantum Software Engineering — *Jan. 2023 - Present*

- Developing and optimizing Quantum & Quantum-Inspired ML algorithms using classified technology and DWave Quantum Computing, exploring novel approaches, and troubleshooting technical challenges.
- Experimenting with innovative techniques, designing experiments, analyzing data, and collaborating with teams and external partners for research papers.

Conmove.io — Pune, IN
Software Engineer(Machine Learning) - Product Lead — *Feb. 2022 - Jul. 2022*

- Led a 6-member team with direct communication with senior management.
- Guided the product team to achieve $52,000 in projected sales for FY 2022-23.
- Developed Torch-based models for object detection and image segmentation, with a deployment pipeline on EC2 instances using Torchserve.
- Implemented a comprehensive logging system for inter-project communication surveillance.
- Enhanced server security using JWT-based authorization middlewares.
- Utilized Docker for efficient deployment on AWS EC2 with NGINX and SupervisorD for application monitoring.

Amazon — Chennai, IN
ML Data Associate - I, Alexa Data Services — *Nov. 2020 - Jan. 2022*

- Managed text, audio, image, and video data, preprocessing them to create datasets for Data Scientists' supervised learning models.
- Mentored 4 team members, improving efficiency, and achieving a 300% increase in accuracy.
- Enhanced overall accuracy by 25% in Data Scientists' training through efficient data structuring and pipelining.

PUBLICATIONS

- A. Akash, **A. Khot**, T. Kim, "Quantum Annealing-Based Machine Learning for Battery Health Monitoring Robust to Adversarial Attacks", *IEEE Energy Conversion Congress and Exposition (ECCE)*, 2023, **Accepted**.

- A. Akash, B. Ahn, A. Jenkins, **A. Khot**, K. Chigarakula, H. Tavares-Vengas, T. Kim, "Smart Grid Device-Specific Malware File Detection using Quantum-Convolutional Neural Network with Deep Transfer Learning", *IEEE Design Methodologies Conference 2023*, **Accepted**.

PROJECTS

InTune - InProgress
Tags: Node.js, GraphQL, WebRTC, Microservice Architecture, Docker, AWS

- Synchronous Music Player, addressing the need for seamless music sharing during social interactions, catering to both close proximity and long-distance connections.
- Developing a Microservice-based backend application with Node.js, PostgreSQL, MongoDB, GraphQL, WebRTC, Docker, and AWS deployment for scalability.

SKILLS

- **Data Structures & Algorithms**
- **Programming Languages** : Java, Python, Javascript, C++
- **Web Technologies** : Spring, Springboot, Hibernate, Django, Flask, FastAPI, REST API
- **Databases** : MySQL, Postgresql, MongoDB
- **Cloud Technologies** : Docker, AWS - EC2, RDS, S3