

Abhilash Joshi

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EDUCATION

MS in Electrical Engineering

UNIVERSITY AT BUFFALO - SUNY

Buffalo, NY | Feb 2019

B.Tech in Electronics and Telecommunications Engineering

UNIVERSITY OF MUMBAI

Mumbai, MH | May 2014

WORK EXPERIENCE

QUALCOMM | SR. SOFTWARE ENGINEER

San Diego, CA | Nov 2021 – Present

- Developed **Autonomous Agent** to automate system-profiling, drive real-time data collection, efficient **Kafka** integration, and improve monitoring accuracy.
- Designed and implemented data pipeline using **Apache Kafka**, **Prometheus** and **Grafana** to visualize subsystem health KPIs, decreasing the time to reproduce system issues by more than 10 times.
- Designed a high performance **ML Inference** pipeline using **PyTorch** with **DirectML**, optimizing model execution on Adreno **GPU** improving inference speed by 30% through effective resource management and batch processing.
- Streamlined visualization of raw data across 50+ benchmark tools by developing a dashboard using **Python**, **Dash**, **Plotly** and **Pandas**, accelerating performance metric analysis and improving data-driven decision making.

QUALCOMM | SOFTWARE ENGINEER

San Diego, CA | Feb 2020 – Nov 2021

- Designed and implemented a robust data pipeline using **Python**, **AWS EC2**, **Athena**, **Glue**, **QuickSight**, and **S3** to analyze 3B+ modem KPIs from 100K+ logs, becoming the primary tool to identify system-level issues.
- Developed a local dashboard by parsing modem log files for network RRC configurations using **Python**, enabling efficient comparative analysis and performance insights for modem testing.
- Developed a **Cellular Network Performance Analyzer** that validated key performance metrics such as **latency**, **throughput**, **signal quality**, improved bottleneck identification by 95%.

PERFORMICS | CLOUD ML ENGINEER

Chicago, IL | March 2019 - Jan 2020

- Developed and deployed AI-powered ad performance prediction models on **AWS SageMaker**, improving the accuracy of the forecast by 15% and driving the optimization of digital ad campaigns for 10+ clients.
- Automated the deployment of ML models for real-time customer segmentation using **AWS Lambda** and **Kubernetes**, resulting in a 20% increase in the effectiveness of personalized ad targeting.

BUFFALO AUTOMATION | MACHINE LEARNING ENGINEER INTERN

Buffalo, NY | Sept 2018 – Jan 2019

- Implemented quantized **TensorFlow CNN** models on **Nvidia GPU** using **ResNet** architecture, achieving 30% faster inference for **real-time image classification**, significantly improving system responsiveness in offline environments.
- Designed and implemented a **TensorFlow CNN (UNet)** to estimate object depth from stereoscopic images, improving maritime navigation and boosting obstacle detection accuracy by 40%.

COLDSPACE LLC | SOFTWARE ENGINEER INTERN

Buffalo, NY | March 2018 – Nov 2018

- Developed a **Tkinter**-based GUI for seamless control, integrated **AWS IoT Core** with **MQTT** for real-time interactions, and utilized **AWS Lambda**, **DynamoDB**, and **S3** for backend automation, data storage, and logging.

NTT COMMUNICATIONS | SYSTEMS ENGINEER

Mumbai, MH | May 2014 – June 2017

- Automated Cisco Catalyst and Nexus switch configurations using **Python scripting**, significantly accelerating deployment speed by 60%.

SKILLS

Programming Languages : Python, C++

Machine Learning Frameworks : TensorFlow, PyTorch, scikit-learn, XGBoost, Keras, NLTK, LangChain, cuDNN, DirectML

AI Techniques: Deep Learning, Reinforcement Learning, Natural Language Processing, Generative AI

Database: SQL, MongoDB, Athena, PostgreSQL

Data Analysis/Vizualization: Pandas, NumPy, Matplotlib, Plotly, Dash, AWS QuickSight