

# KAUSTUBH BADRIKE

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**Software Development | Machine Learning | Data Science**

## CORE COMPETENCIES

- Languages: Python, TypeScript, Java, C#, JavaScript, C++, Go, SQL, PL/SQL, HTML, CSS
- Frameworks: .NET, Django, Angular, React, numpy, pandas, scipy, Node.js, scikit-learn, jQuery
- Tools: MongoDB, Azure, RESTful API, git, Docker, GitHub, CI/CD, Jira, Linux, MySQL, PostgreSQL, Spark, Hadoop

## PROFESSIONAL EXPERIENCE

**Walmart, Inc., Sunnyvale**

October 2023 – Present

### SOFTWARE ENGINEER III

- Redesigned stateful microservices to stateless architecture, boosting system throughput by **30-60%**, enhancing scalability, and improving performance.
- Implemented container analysis to determine optimal CPU and memory thresholds, cutting resource costs by **50%** and enabling greater parallelization, resulting in improved efficiency and scalability.
- Implemented custom Prometheus metrics and alerting system, reducing MTTR for critical infrastructure by up to **70%**.
- Enabled efficient analysis through machine-friendly data in Splunk, improving incident response and decision-making.
- Implemented Infrastructure as Code to provision critical infrastructure with high availability and fault tolerance.
- Implemented GitOps to streamline deployment processes, enhance collaboration, and ensure consistent infrastructure management, leading to reduced downtime and improved release cycles

**North Carolina State University, Raleigh**

January 2022 – October 2023

### GRADUATE RESEARCH ASSISTANT

- Conduct and analyze the effect of quantum program characteristics on IBM quantum devices and provided recommendations through statistical analysis using **numpy**, **scipy**, and **scikit-learn** in **Python**.
- Enforce best practices in building a transformation model for using Qiskit programs on a DAX cloud device, a contribution to the NSF-funded Software-Tailored Architecture for Quantum co-design project.

**GEP, Mumbai, India**

July 2019 – July 2021

### SOFTWARE ENGINEER

- Established and utilized strategic methodologies to efficiently generate data transformation (Liquid and XSLT) templates from **frontend** user interactions in **TypeScript / JavaScript**.
- Developed **scalable, distributed backend** systems using **.NET, C#, SQL** and **Microsoft Azure cloud** solutions.
- Utilized predictive modeling and strategic engineering procedures to redevelop from monolith to **Angular** micro-frontend architecture.

**CMS InfoSystems**

June 2018 – July 2018

### IT INTERNSHIP

- Improved troubleshooting, uptime, and maintenance processes for high volume governance systems.

**Jawaharlal Nehru Port Trust**

June 2017 – July 2017

### INDUSTRIAL EXPOSURE INTERNSHIP

- Documented specifications and identified bottlenecks for logistics software and equipment.

## PROJECTS

### Image inpainting using Neural Networks

- Played an integral role in creating **Tensorflow / Keras** models to predict pixel values in missing regions from incomplete and unreliable visual data. Mitigated hue, luminosity, and localization biases and improved baseline metrics by **63%**

### Automated Malware Analysis

- Obtained runtime threat analysis for insecure file execution in a secure sandbox environment with **96%** accuracy.
- Trained **pytorch** model with data infrastructure utilizing VirtualBox API to spin up Virtual Machine (VM) clones, YARA rule matching on memory snapshots, and a combination of Wireshark and the Yeti platform for network packet analysis.

## EDUCATION

**Master of Science in Computer Science** (GPA: 3.792/4) | North Carolina State University

Aug 2021 – May 2023

**Bachelor of Engineering in Computer Engineering** (GPA 7.9/10) | University of Mumbai, India

Aug 2015 – May 2019

## CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate

Microsoft Certified: Azure Data Scientist Associate

Programming, Data Structures and Algorithms using Python (NPTEL)

Oracle Certified Associate, Java SE 8 Programmer

Full Stack Web Developer I Nanodegree (Udacity)

IBM Quantum Challenge - Fall 2021 – Advanced

Certified ScrumMaster (CSM)

Programming in C++ (NPTEL)