

Umesh Chandra Karagatla

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EDUCATION

University of Texas at Arlington, Texas

Master of Science in Computer Science

August 2022 – May 2024

GPA: 4.0

Relevant Coursework: Web Data Management, Software Engineering, Cloud Computing, Design and Analysis of Algorithms, Data Analysis and Modelling Techniques, Data Mining, Artificial Intelligence, Neural Networks, Machine Learning, Numerical Methods

CVR College of Engineering-JNTUH, India

Bachelor of Technology in Computer Science and Engineering

August 2016 – August 2020

GPA: 8.16

TECHNICAL SKILLS

Programming languages: Python, C, Java, Golang, JavaScript

Web Technologies: REST APIs, Microservices, HTML/CSS

Libraries: NumPy, Pandas, Matplotlib

Frameworks: React.js, Angular.js, Node.js, Junit, Spring Boot

Database Systems: MySQL, PostgreSQL, MongoDB (NoSQL)

Miscellaneous: Git, Linux, Docker, Kubernetes, AWS, Azure

EXPERIENCE

University of Texas at Arlington | Web Developer

Arlington, USA

February 2023 – June 2023

- Spearheaded the development of over **20** front-end and backend components for the college website using **ReactJS**, **JavaScript**, **HTML5**, and **CSS3**.
- Crafted captivating user interfaces and designed forms, resulting in a **30%** increase in user engagement.
- Documented and addressed more than **50** customizations and technical issues across the site.

Mouritech | Software Engineer

Hyderabad, India

September 2020 – March 2022

- Engineered end-to-end search feature for an internal web application using **ReactJS** and **TypeScript**, elevating user engagement by **30%**.
- Implemented comprehensive test cases using **Jest**, achieving **90%** code coverage, and reducing the number of reported bugs by **50%** post release.
- Orchestrated deployment and maintenance of cloud infrastructure using **AWS Cloud Development Kit**, ensuring project scalability and reliability.
- Created monitoring and logging dashboards using **AWS CloudWatch** to identify and troubleshoot potential issues in production.
- Developed intricate **SQL queries** and **procedures**, resulting in a **30%** reduction in the time required to generate employee benefits reports, thereby increasing operational efficiency.
- Built **AWS Quicksight** dashboards to monitor real-time data; implemented Single Sign-On (SSO) using **AWS CDK** for enhanced security and user experience, optimizing dashboard accessibility.
- Pioneered the automation of report generation by creating Python **Lambda functions** which receives events and executes queries against **Athena**.

ACADEMIC PROJECTS

UTA MS CS Website

- Constructed a robust web application comprising over 30 interactive components leveraging HTML5, CSS3, JavaScript, ReactJS, PHP, NodeJS, Laravel, and MongoDB, culminating in a successful deployment on the UTA cloud platform.
- Led a 6-member team establishing a structured team environment with specialized roles that enhanced project delivery.

Cloud Native Monitoring Application

- Created a monitoring web application utilizing Python with Flask and psutil to track and display system metrics in real-time.
- Containerized the application with Docker, ensuring efficient image building and local testing.
- Established an AWS Elastic Container Registry (ECR) using Python's Boto3 module and pushed the image.
- Deployed the application on an AWS Elastic Kubernetes Service (EKS) cluster with nodes.

Analyzing Disneyland Reviews using Sentiment Analysis

- Designed a RNN machine learning model utilizing the Long Short-Term Memory (LSTM) algorithm to classify 42,000 reviews into three categories: positive, negative, and neutral.
- Visualized the results using word cloud and heatmaps to identify the most common categorical phrases.
- Achieved an overall accuracy of 84% and F1 score of 0.81 on the test data.

CERTIFICATIONS

- AWS Certified Cloud Practitioner
- Full Stack Developer – Java, RESTful WS, JSP, Spring by Mosh