

MANIDEEPIKA REDDY MYAKA

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SUMMARY

Software Engineer with hands-on experience in **full-stack development**, **cloud infrastructure**, and **automated testing**. Proficient in **Python**, **Java**, **Selenium**, **Docker**, **GCP**, and **AI/ML frameworks**, with a proven record of **optimizing performance**, and **automating workflows**.

WORK EXPERIENCE

Research Assistant | SWATS Group | North Carolina State University | Raleigh, NC **July 2025 - Present**

- Developed a fuzzing framework to detect bugs by identifying failure patterns from **PyTorch** and **TensorFlow** APIs.

Teaching Assistant | North Carolina State University | Raleigh, NC **January 2025 - April 2025**

- Developed a **Python** defect prediction model with 95% accuracy, creating the baseline standard for student projects.
- Achieved a 20% increase in student performance by managing **Moodle** resources and providing feedback on assignments.

Research Assistant | QUEST Group | North Carolina State University | Raleigh, NC **April 2024 - August 2024**

- Built quantum algorithms in **Python** and **Qiskit** for Alzheimer's detection, aiming to reduce dementia care costs by 30%.
- Optimized code to reduce circuit depth by 25% in noisy environments and deployed simulations on **HPC** systems.

Programmer Analyst | Cognizant | Hyderabad, India **June 2022 - June 2023**

- Automated UI testing with **Java-Selenium** and **TestNG**, uncovering 200+ bugs and reducing post-release issues by 80%.
- Ensured data integrity by writing **SQL** queries and improved backend reliability by **API testing** using **Postman** and **REST**.
- Collaborated with Agile teams via **Jira**, accelerating defect resolution by 40% and enhancing sprint delivery.
- Maintained comprehensive test documentation and automation scripts, cutting manual testing time by 20 hours per month.

Quality Assurance Engineer Intern | Cognizant | Hyderabad, India **January 2022 - May 2022**

- Automated testing for web applications like Trutime and Udemy using **Selenium**, boosting testing speed by 80%.

PROJECT EXPERIENCE

Ellipsis: AI-Powered Podcast Generation Tool | React, Redis, llama.cpp, Tailwind CSS **May 2025 - June 2025**

- Developed **LLM** based podcast generator from prompt to audio using **multi-speaker TTS**, reducing manual scripting time.
- Designed a **multi-agent** content evaluation system and integrated **Redis Pub/Sub** and **SSE** to stream live script generation

Brain Tumor Detection Using Convolutional Neural Networks | Keras, EDA, Matplotlib **March 2025 - April 2025**

- Built a CNN model using **TensorFlow/Keras** to classify brain MRI scans for tumor detection, achieving 97% accuracy.
- Enhanced model generalization by 20% through **EDA**, **data augmentation**, and **tuning** across varied image inputs.

Scalable Flight Reservation System | Kubernetes, Docker, Locust, Minikube, HPA **October 2023 - November 2023**

- Deployed a flight booking system with **Kubernetes** and **Docker**, ensuring high availability and resilience under peak traffic
- Optimized scalability with **HPA** and validated performance with **Locust**, improving responsiveness during load spikes.

EDUCATION

North Carolina State University | Master of Science | Computer Science **May 2025**

Chaitanya Bharathi Institute of Technology | Bachelor of Engineering | Electrical and Electronics Engineering **June 2022**

CORE SKILLS

Languages & Scripting: Python, Java, JavaScript, SQL, Ruby, HTML/CSS, JSON, Gherkin, Bash

Frameworks & Tools: React, Ruby on Rails, Selenium, Jenkins, Maven, Git, Cucumber, BDD, TDD

AI/ML & Big Data: TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, Numpy, Matplotlib, Qiskit, MCP

Cloud & DevOps: Docker, Kubernetes, GCP, Locust, Terraform, Wireshark, Socket Programming

Databases & Testing: MySQL, PostgreSQL, MongoDB, REST API, SOAP UI, Postman, Pytest, TestNG, JUnit

ACCOMPLISHMENTS

- Awarded **Scholarship (2018-2022 & 2023-2025)** by the **Government of Telangana**, based on the academic merit.
- Contributed to **BugsInDLLs** by creating environments to reproduce version-dependent bugs in DNN libraries.