

DEEPTHIKA SIVARAM

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EDUCATION

State University of New York at Buffalo

Buffalo, New York

Master of Science(M.S) in Computer Science Engineering (Artificial Intelligence/ Machine Learning) (CGPA: 3.95)

Aug 2024 - Present

College of Engineering Guindy, Anna University

Chennai, India

Bachelor of Engineering(B. E) in Computer Science Engineering (CGPA : 9.26)

Aug 2017- May 2021

SKILLS

Programming Languages:	Python, Java, C++, C#, JavaScript, SQL, Bash, R, YAML
Frameworks & Libraries:	FastAPI, Flask, PyTorch, TensorFlow, scikit-learn, Hugging Face, OpenCV, Librosa, Seaborn
Backend & DevOps:	REST APIs, Microservices, Docker, Kubernetes, AWS, GitHub Actions, CI/CD
Databases & Tools:	PostgreSQL, MySQL, MongoDB, Git, Jira, GitHub, BitBucket, Tableau, Linux
ML Architectures:	CNN, RNN, LSTM, GRU, Transformer, BERT, YOLO, XGBoost, Random Forest

WORK EXPERIENCE

CITIGROUP

Chennai, India

Software Development Engineer

July 2021 - July 2024

- **Led two automation projects** interfacing with product and engineering teams, improving system QA throughput by **70%**
- Engineered robust **test automation frameworks** in **Java** and **C#** for backend services, achieving **65% reduction in manual testing time** and increasing automated regression coverage by **85%**.
- Built and maintained **REST API test harnesses** using tools like **RestAssured** and **Postman**, resulting in **40% lower defect leakage** and accelerating release cycles by **30%**.
- Wrote optimized **MySQL queries and stored procedures** for validating high-volume transactional workflows, improving data integrity checks by **50%**.
- Built mobile test framework in **Java** integrated with **Perfecto**, enabling cross-platform testing on 100+ devices and reducing mobile QA effort by **60%**.
- Active contributor to internal **Innovation Team**; developed reusable test data generation utilities and dynamic linkage scripts in **Java** and **C#** for 20+ services, eliminating manual prep by **100%** and reducing test cycles by **40%**.
- Acted as **Subject Matter Expert** for the **Mutual Funds domain**, leading **10+ technical sessions** that improved domain proficiency across **3 teams** and **accelerated onboarding for 15+ engineers**.
- Participated in code reviews and test strategy design, promoting **SOLID principles**, **TDD**, and reusable test architecture.
- Recognized with **Citi Gratitude Copper and Bronze Awards** for innovation in automation and cross-team impact.

MORGAN STANLEY

Bangalore, India

Software Development Intern

May 2020 - July 2020

- Developed an **end-to-end DevOps POC application** to automate CI/CD workflows for microservices-based systems.
- Used **Docker** to containerize services, built **Jenkins YAML pipelines**, and deployed via **Kubernetes** to the private cloud.
- Integrated **Bitbucket webhooks** for commit-based deployment triggers, reducing manual intervention by **90%** and increasing deployment frequency by **3x**.
- Implemented load balancers and orchestration logic to manage dynamic service routing and resilience.
- Designed and implemented **Blue-Green Deployment** strategy, achieving **100% availability** during rollouts and reducing rollback time by **90%**.
- Reduced deployment time by **75%** (from ~40 mins to <10 mins) and improved pipeline stability by **55%** through build stage parallelization and caching.

PROJECTS

- **AI-Based Sketch to Webpage Converter**: Built an end-to-end DL pipeline to convert UI sketches to HTML using **YOLOv8 for object detection**, **custom CNN for UI-aware features**, **Transformer with self-attention for hierarchy modeling**, and **GRU for tag generation (mAP@50 = 0.96)**.
- **AI-Powered GitHub Code Review Bot**: Built a backend service with **FastAPI** and **GitHub Webhooks** to automate PR reviews, integrating API validation and reducing manual review effort by **40%**.
- **Temporal Trends in Hospital Admissions**: Performed comparative evaluation of baseline ML classifiers for pollution-linked admission forecasting, with **Logistic Regression (accuracy: 96%)** offering optimal accuracy–interpretability tradeoff.
- **Audio Classification Using STFT & TensorFlow**: CNN audio classifier with **STFT** on ESC-50 using **TensorFlow**; achieved **73% accuracy**.
- **Abstractive Summarization of Legal and News Documents**: Fine-tuned **BART** on **BillSum** and **Multi-News** for abstractive summarization; achieved **ROUGE-1: 47%**, **BLEU: 16%**, **BERTScore: 88%**.