

Soubhagya Akkena

Raleigh, NC -27606 | sakkena@ncsu.edu | +1 9196333760 | linkedin.com/in/soubhagya-akkena | github.com/soubhi

EDUCATION

North Carolina State University, Raleigh, North Carolina

Expected May, 2025

Master of Science in Computer Science

Coursework: Algorithms, Automated Learning and Data Analysis, Machine Learning, Neural Networks and Deep Learning, Computer Network Security, User Experience, Operating systems

University of Hyderabad, School of Computer and Information Sciences

July 2016 - July 2021

Integrated Master of Technology in Computer Science, minor in HPC

GPA: 9.1/10

WORK EXPERIENCE

Software Engineer Intern, Arrcus Inc., San Jose, CA

June 2024 - Aug 2024

- Engineered an **abstraction layer** between **Confd** and network apps, reducing system dependency on third-party tools
- Developed a **Python-based parsers and automated code generation**, facilitating seamless integration with **Message broker** tables and improving system resilience
- Integrated and reduced Confd reliance by **30%** and **enhanced the scalability** and adaptability of the system to future requirements

Student Intern, North Carolina Institute of Climate Studies

Apr 2024 - June 2024

- Scaling** the workflow for creation of **climate composites** for various teleconnections (e.g., ENSO, MJO, NAO) and their monthly data across **12 months** by leveraging **AWS** resources efficiently for computation and storage.

Software Engineering Specialist, General Electric Vernova, India

Jan 2021 - July 2023

- Worked for **2 years** on highly scalable, sustainable on-prem SaaS manufacturing management system, supporting 40+ clients across 22 countries primarily **developed in Spring Boot, Angular, SQL Server and CouchDB**
- Led development of **REST APIs** integrating **ERP** with Spring Boot microservices for raw material lot assignment to work orders, alongside implementing an OEE Dashboard yielding a **30% cost reduction** by **optimizing production efficiency**.
- Migrated 30+ microservices** from **In-memory cache to Redis** cache thus significantly improving the data retrieval rates
- Led a team of 10** developers in addressing **critical vulnerabilities**, including the high-profile Log4j issue, by detecting and resolving CVE and OSS Vulnerabilities, ensuring robust **system security** against potential cyber threats.
- Developed an **Automation Script** to automate **CVE scans** and gathered the data in a CSV file using **bash script**

Machine Learning Intern, TekFriday Processing Solutions, India

May 2019 - July 2019

- Built a **pipeline model** for detecting and visualizing fraudulent patterns in the Banking dataset using **Catboost** with an **accuracy of 88%**
- Developed an **OCR** application to extract information from bank statements by training **15000+** bank statement samples; which involved semantic segmentation, bounding boxes detection and labeling, and digitalization using Google's Tesseract

PROJECTS

Cell Image Generation using Large Language and Latent Diffusion models

- Developed a POC for an AI-driven **image-to-image generator** using models like DALL-E, trained on biological cell imagery for innovative cell image generation from user prompts

Mass data processing using Hadoop streaming and Document Tagging [Big Data]

- Performed mass data processing on unlabeled 20News archives dataset with **Hadoop streaming** by loading the data onto the **Apache HDFS**, performing deduplication, creating **TF and TF-IDF** vectors, discovering topics using **Latent Dirichlet Allocation (LDA)** algorithm for **tagging** the news articles

Human Activity Recognition Time Series Classification using LSTM [Python, Keras, Pandas]

- Developed and evaluated deep learning models for human activity recognition, achieving up to 90.8% accuracy on the UCI HAR dataset using LSTM, CNN-LSTM, and ConvLSTM network architectures.

Emotion Detection System [Python, Keras] [Personal project]

- Developed a real-time emotion detection system using deep learning with CNN and VGG16 models, achieving 97.3% training and 95.7% validation accuracy across seven emotion categories.

TECHNICAL SKILLS

Programming & Scripting: C/C++, Python, Java, Typescript, NodeJS, Java, C/C++, BASH, React, Ruby, AngularJS, Javascript

Tools: Angular, REST APIs, Kafka, Rabbit MQ, Redis Cache, Spring Boot, Django, MongoDB, MS SQL Server, CSS, HTML, XML/XSLT, JSON, Linux, Windows, AWS, Gitlab, Jenkins, Docker, Git, Kubernetes

ML, AI & Big Data Tools: TensorFlow, PyTorch, Keras, Apache Hadoop, Spark, HDFS, Jupyter Notebook

Certifications: NVIDIA- Introduction to Deep Learning, NVIDIA- Getting Started with Image Segmentation

OTHER ACTIVITIES AND INTERESTS

- Co-Founder and Vice President** of the first-ever coding community 'CodoSapiens' at the University of Hyderabad (2019)
- Member of **Women in Computer Science (WiCS)** and **Society for Women Engineers (SWE)**
- I like to draw (specially portrait sketching), sing (Indian Classical Music), dance, am a Space Geek, and love to go on hikes