SAMIKSHA SOMIREDDYGARI

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SUMMARY

Driven Computer Science Master's student at Rochester Institute of Technology (GPA: 4.0), specializing in Machine Learning, Automation, and IT system support.Adept at troubleshooting, documentation, and streamlining system deployment processes. Passionate about improving IT infrastructure and ensuring smooth, reliable software and hardware operations.Proficient in Python, Java, and cloud-native development with hands-on experience in scripting, version control, and CI/CD workflows.

EDUCATION

Master of Science in Computer Science - Rochester Institute of Technology| 4.0/4.0 **Aug '23 - Dec '25**

Bachelor of Technology in Computer Science - Jawaharlal Nehru Technological University **Aug '17 - July '21**

EXPERIENCE

System Administrator, Rochester Institute of Technology *- part time | ROC,NY* **May '24 - Present**

Skills – Python, MySQL, LAMP,Imaging Tools (MDT), Technical Documentation

- **Technical Support & Imaging:** Delivered hands-on IT support across lab environments, including computer setup, OS imaging using internal tools, and deployment of academic systems—mirroring workflows found in manufacturing IT environments.
- **Hardware & Peripheral Maintenance:** Troubleshooting and maintaining campus-wide printer infrastructure, diagnosing recurring issues, managing service tickets, and proactively preventing downtime.
- **System Administration & Optimization:** Redesigned and optimized MySQL schemas to improve data retrieval speeds by 25%, ensuring robust system integrity across academic operations.
- **Web Development & Backend Efficiency:** Enhanced university web systems using the LAMP stack, resulting in a 30% boost in performance.
- **Documentation & SOP Creation:** Led content management updates and created step-by-step troubleshooting and user guides, contributing to a 40% increase in help desk self-service efficiency.
- **Mentorship & Collaboration:** Trained and onboarded 20+ new team members, fostering a culture of accountability and technical excellence.

TECHNICAL SKILLS

Programming languages: Python | SQL | Java | MySQL | PostgreSQL | NoSQL | MongoDB | HTML | CSS | C++ | PHP | JavaScript | React | C
Data Visualization: PowerBI | Tableau | AWS QuickSight

Frameworks/Tools: Git | Visual Studio | Eclipse | Angular | Jupyter | Google Colab |PgAdmin | Pycharm | IntelliJ | Hadoop |.NET

Cloud Technologies: Amazon Web Services (AWS) | Microsoft Azure | Google Cloud Platform (GCP)

Others: Computer Imaging | Operating Systems | Big Data Analytics | Object Oriented Programming | Data Structures | Web Development | Machine Learning | Convolutional Neural Networks(CNN) | Algorithms and Complexity | Theory of Computation | Artificial Intelligence | Computer Vision | DevOps | Rest API's | Problem Solving

ACADEMIC PROJECTS

Facial Emotion Recognition System **Machine Learning**

- Developed a facial emotion recognition system using Python and OpenCV, integrating Convolutional Neural Networks via TensorFlow and Keras on Google Colab to achieve a model accuracy improvement of 35%.
- Engineered and refined a comprehensive data preprocessing and model training pipeline, significantly reducing error rates in real-time emotion detection.

GIT_COCO: Enhanced GIT Model for Vision and Language **Machine Learning**

- Led the enhancement of the Generative Image-to-text Transformer model, fine-tuning it on the COCO dataset to generate contextually accurate captions. Achieved a 20% increase in caption relevancy and descriptive precision using Python in PyCharm.
- Coordinated a team effort that resulted in marked improvements in automated image captioning, contributing to a 15% advancement in model performance metrics.

Airline Delay and Cancellation **Big Data Analytics**

- Analyzed U.S. flight data from 2016 to 2024, using both relational and document-oriented database models to pinpoint key factors contributing to airline delays and cancellations. Enhanced data integrity and analysis capabilities through complex SQL queries and Python scripting.
- Implemented advanced data cleaning techniques and utilized Tableau for dynamic data visualization, improving data usability by 40%.
- Applied frequent itemset and association rule mining to extract actionable insights, driving a 25% improvement in operational efficiency and delay management strategies.

Sign Language Translator for the Speech Impaired **Machine Learning**

- Created a sign language translation application that detects hand gestures and translates them into alphabets, achieving an accuracy rate of 88% with the integration of the InceptionV3 algorithm using Python on Google Colab.
- Played a crucial role in a team that implemented feature vector extraction, enhancing the translation system's responsiveness and reliability for users with speech impairments.

Song Recommendation System **Machine Learning**

- Engineered a personalized song recommendation system using Python, which employs Popularity-based, Collaborative Filtering, and Singular Value Decomposition (SVD) models. Enhanced user engagement and satisfaction by tailoring music suggestions, resulting in a 30% increase in user retention.
- Optimized algorithmic efficiency, leading to a 50% reduction in recommendation latency and a 20% improvement in precision of suggested tracks.

LICENSES AND CERTIFICATIONS

1. Earned the **Machine Learning A-Z: AI, Python & R + ChatGPT Prize** certificate from Udemy, demonstrating advanced proficiency in Python, R, and AI technologies for effective predictive modeling and data analysis.
2. Earned the **IBM Data Analyst Professional Certificate** from Coursera, demonstrating proficiency in a broad range of data analytics skills. Completed rigorous coursework including 'Databases and SQL for Data Science with Python', 'Data Visualization with Python and PowerBI', 'Data Analysis with Python', and advanced Excel techniques for data analysis. Excelled in applying these skills to practical, real-world data challenges, enhancing business decision-making and operational efficiency.
3. Successfully completed the Udemy course "**Artificial Intelligence A-Z: Build 7 AI + LLM & ChatGPT**," gaining expertise in Q-Learning, Deep Q-Learning, Convolutional Q-Learning, advanced Actor-Critic methods (A3C, PPO, SAC), and Large Language Models, which honed my skills in developing AI-driven solutions for complex decision-making and language processing tasks.
4. Participated in **BrickHack**, where we developed the "AI Interviewer" platform using CrewAI to generate personalized interview questions and feedback, enhancing practice opportunities for college students.
5. Awarded a Certificate of Appreciation for participating in **TekHack – 24-hour hackathon**, conducted by Smart Bridge in collaboration with IBM. Developed a ChatBot using IBM Watson, showcasing expertise in AI, NLP, and chatbot development.
6. Recognized as 3rd Runner-Up in the **Master Orator Championship**, demonstrating strong interpersonal, public speaking, and communication skills.