Naga Rama Krishna Prasad Rachapalli

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Lawrence, Kansas - 66049, USA

Objective

Motivated and detail-oriented Computer Science student seeking an entry-level position in software development or machine learning. Eager to apply strong programming skills, problem-solving abilities, and knowledge of Artificial Intelligence to contribute to innovative projects and gain hands-on experience in a dynamic work environment.

Experience

- **Graduate Research Assistant** *10-2024 - 12-2024*
  University of Kansas Lawrence, USA
  - Contributed to a project on Neural and Electromyography (EMG) Decoding using advanced machine learning techniques to enhance the understanding of motor control and neural dynamics.
  - Analyzed and visualized neural activity data and EMG signals to extract meaningful patterns and insights for research conclusions.
  - Applied deep neural networks for decoding neural signals, focusing on the application of deep learning techniques in biomedical research.
  - Gained expertise in preprocessing complex datasets, designing and training machine learning models, and interpreting results to support data-driven insights.
- **Trainee Software Engineer** *08-2022 - 07-2023*
  Epsilon Softech Hyderabad, India
  - Developed a similarity-based recommendation system leveraging AI/ML methodologies for efficient information retrieval.
  - Designed and implemented data pipelines, including data preprocessing, tokenization, and storage using pickle files to enable scalable and optimized data retrieval
  - Created workflows to process incoming inputs by converting them into numerical embeddings and performing dot product operations for similarity scoring, ranking, and returning top-5 relevant matches.
  - Contributed to the development and evaluation of AI models using embedding-based architectures to enhance system performance, while supporting testing, debugging, and deployment processes to ensure safety, reliability, and performance.
  - Utilized Python, Pandas, NumPy, and machine learning frameworks to create maintainable and extensible code, adhering to best practices in software development.

Education

- **University of Kansas** *08-2023 - 05-2025*
  Mater of Science in Computer Science Lawrence, USA
  - GPA: 3.70/4.00
- **Guru Ghasidas University** *05 2023*
  BTech in Computer Science and Engineering Bilaspur, India
  - Grade: 8.66/10
- **Sri Chaitanya Junior College** *05-2019*
  Intermediate Vijayawada, India
  - GPA: 10/10

Projects

- **Face Recognition Using Transfer Learning and ESP32-S3 Deployment** *09/2024 - 12/2024*
  Tools: Tensorflow, TensorflowLite, PlatformIO
  - Developed a Face Recognition system using Transfer Learning with Convolutional Neural Networks (CNNs) to optimize model performance for real-time applications.
  - Performed model quantization to reduce computational load and enhance efficiency for deployment on embedded devices.
  - Deployed the quantized face recognition model on an ESP32-S3 microcontroller using PlatformIO for seamless integration.
  - Ensured efficient execution of face recognition tasks on ESP32-S3, demonstrating expertise in embedded AI and edge computing.

- **Cloud-Based E-commerce Data Engineering Project** *01/2023 - 05/2023*
  Tools: AWS Services
  - Designed and implemented a cloud-based ETL pipeline to ingest, transform, and load structured and semi-structured e-commerce product data from multiple sources using AWS Glue and AWS Lambda for automated data processing.
  - Developed a centralized data lake architecture on Amazon S3 to securely store and manage large volumes of raw and processed data, ensuring scalability and high availability for advanced analytics.a
  - Utilized AWS Athena for interactive querying of data stored in S3 and integrated Amazon QuickSight to create dynamic, data-driven dashboards for real-time e-commerce analytics and business insights.
  - Implemented robust access control mechanisms using AWS Identity and Access Management (IAM) to ensure secure data handling, while optimizing system performance for large-scale data processing in a cloud environment.
- **Optimizing Text Summarization Models with Hugging Face Transformers** *01/2024 - 05/2024*
  Tools: Hugging Face, LLM, Pandas, Numpy, Evaluation Metric Tools
  - Fine-tuned a transformer model from Hugging Face for text summarization using a supervised dataset
  - Preprocessed and optimized training data to enhance model performance and summary coherence.
  - Conducted experiments with different transformer architectures to compare performance and improve summary quality.
  - Evaluated model performance using ROUGE metrics and optimized hyperparameters for better results.

Skills

- **Programming Languages:** Python, C++, Java
- **Machine Learning:** Regression and Classification Models, Convolutional Neural Networks (CNN), Recurrent Neural Networks (RNN), Generative AI (Transformers, LLM, Langchain, Hugging Face,Promp Engineering)
- **Cloud and Data Engineering:** AWS (Athena, Glue, S3, Lambda, SageMaker, Redshift, QuickSight), Data Warehousing, Data Lake Management,Spark
- **Web Development:** Flask, HTML, CSS
- **Database Management:** SQL, Neo4J (Graph Data Structure)
- **Version Control:** Git
- **Data Structures and Algorithms:** Strong knowledge of core concepts and problem-solving techniques

Additional Experience

- **Mathematics grader** *01/2024-12/2024*
  University of Kansas
  - Graded undergraduate mathematics assignments, providing detailed feedback on problem-solving approaches.
  - Applied strong analytical and quantitative problem-solving skills to assess complex mathematical problems.
  - Collaborated with faculty and staff to ensure consistent grading standards and support curriculum development.
  - Communicated effectively with students, providing insights into mathematical concepts and encouraging improvement.

Certifications

- **AWS Certified Machine learning Specialty** *12-2024*
- **Generative AI Fundamentals | Databricks** *01-2025*
- **LLM Fundamentals using Graph Database | NEO4J** *01-2025*
- **Complete Data Science, Machine Learning, Deep Learning, NLP** *10-2024*

ADDITIONAL INFORMATION

- Strong written and verbal communication skills for technical and non-technical audiences.
- Proficient in delivering presentations, writing technical reports, and collaborating across teams.
- Competing in various competitive programming challenges.
- Achieved 96.2 percentage in IIT-JEE mains.