Prasanna V.

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Education

M.S in Computer Science (Data Science) |California State University | GPA 3.8/4.0 **May 2024**

Relevant courses: Applied Machine Learning Algorithms, Natural Language Processing (NLP), Software Engineering

Bachelor of Engineering (Computer Engineering) | Mumbai University | GPA 3.7/4.0 **May 2020**

Relevant courses: Linear Algebra, Data Structure and Algorithms Analysis, Software Security, Foundation of Data Science

Technical Skills

Programming Languages: Python, JavaScript, Java, C/C++, R

Machine Learning: Scikit-learn, NLTK, Spacy, GPT, BERT, TensorFlow, Yolov8, PyTorch, Keras, Transformer, OpenCV

Python packages: Flask, NumPy, Pandas, Jupyter Notebook, Matplotlib, FastAPI**,**

Web development and Database: React JS, Vue, Node, PostgreSQL, MySQL, NoSQL, Oracle, Milvus Vector DB

Cloud Technology and Tools: AWS, Azure, GCP, Hadoop, MLflow, Docker, Kubernetes, Git, GitHub, Jira, Jenkins

Professional Experience

Research Analyst Intern, Harness, San Francisco, California December 2023-Present

- Developed and deployed an advanced Retrieval Augmented Generation (RAG) chatbot facilitating knowledge sharing across 9 internal teams, resulting in a 30% increase in inter-team collaboration efficiency.
- Designed and implemented a security tool that automated the retrieval identifying and presenting security vulnerabilities in GitHub, GitLab, and Jenkins setups, leading to a 20% reduction in potential security risks.
- Optimized application scalability and performance using AWS enhancing user experience.

Data Scientist, Professional and Continuation Education CSU, Chico, CA January 2023-November 2023

- Optimized intricate database schemas in MySQL and Oracle, while building and managing data CI/CD pipelines using Jenkins, accelerating data throughput by 20%.
- Trained and mentored 6 junior data engineers on best practices for SQL query optimization and ETL process design.
- Created Python modules to improve data processing and analysis, resulting in a 25% reduction in processing time.

Data Science Intern, Center for Healthy Communities, Chico, CA August 2022-December 2022

- Proposed machine learning ensemble methods for classifying effective campaign partners with 88% accuracy, resulting in a 20% increase in conversion rate.
- Analyzed over 15000+ survey data using Applied Natural Language Processing (NLP) techniques such as text analytics, data cleaning, fine-tuning and using BERT for topic modeling, providing valuable insights for decision-making.

Machine Learning Engineer, Cornerstone OnDemand, Mumbai, India July 2020-July 2022

- Engineered single-page application with Vue JS, improving front-end development, component lifecycle, and modular reusability, leading to a 33% increase in turnaround time.
- Built and integrated Computer Vision model Flask Rest API with Web App, detecting screen elements with 92% accuracy.
- Employed multivariate experiments and A/B tests, tripling user engagement through data-driven refinements in feature prioritization, UI design, and alerting thresholds.

Machine Learning Intern, Indian Institute of Tropical Meteorology (IITM), Pune, India July 2019-March 2020

- Created efficient Deep Learning algorithm SRCNN (Super-Resolution Convolutional Neural Network) with 93% accuracy, performing pixel-wise arrangements of low to high-resolution images.
- Reduced deployment time by 50% by implementing Machine Learning pipelines that automated the entire workflow, from preprocessing to model evaluation, leveraging India's fastest HPC, Pratyush, for training and evaluation

Research Publication

- "Sensor Fusion with Multi-modal Transformer for Endangered Animal Protection" (SPIE 23-24 Conference).
- "Smart Surveillance with OpenCV and Motion Analysis" (SSRG Int. Journal of VLSI & Signal Processing 2020).
- "Deep Learning–Based Downscaling of Monsoon Rainfall in India"(Theoretical and Applied Climatology, Springer 2020).

Achievements

- Vice President of Grigora Avis Technical Club (Drone AI Automation), California State University, Chico, 2022.
- Winner, Smart India Hackathon, ISRO(Indian Space Research Organization) Domain, 2020.

Academic Projects

- **PDFbot**: RAG-based App for PDF Uploads, Embedding Selection, Vector Storage, and LLM Query Answering (GitHub).
- **Nowcasting:** AI/ML-Based Nowcasting of Satellite Images Using ConvLSTM, Accurate Weather Predictions (GitHub).
- **SentimentBot**: BERT-based Sentiment Text Analysis Tool for Precise Emotional Insights (GitHub).