SHREYA LAKSHMAN

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SUMMARY

Data Scientist with a Master's in Applied Data Science and a track record in designing machine learning models and automation tools. Experience includes building recommendation systems, chatbots, and pipelines that drive significant efficiency gains. Skilled in Python, SQL, and AWS infrastructure, with a proven ability to collaborate with engineering teams to optimize system performance and cost. Adept at solving complex problems in high-scale data environments.

EDUCATION

PES University **Aug 2017 - May 2021**
Bachelor of Technology
- **Achievements:** Received merit scholarship for 3 years

University of Southern California **Aug 2023 - May 2025**
Master of Science, Applied Data Science

EXPERIENCE

TipTop Technologies **Sep 2024 - Present**
Data Scientist *Sunnyvale, CA*
- Developed a Slack bot that handled 500+ weekly queries by leveraging Python to enable dynamic file uploads and deliver contextual responses, achieving 96% accuracy in under 2 seconds and a 99% success rate.
- Engineered a recommendation system for a proprietary AI platform using statistical modeling and machine learning techniques, which increased click-through rate by 25% and reduced irrelevant content by 30%.

Hewlett Packard Enterprise **Jan 2021 - May 2023**
Software Engineer *Bangalore, India*
- Devised and automated data processing pipelines using Python and Ansible, reducing manual intervention by 85% and saving over 200 engineering hours per month while enhancing system insights.
- Containerized deployment processes with Docker, streamlining model deployment and reducing deployment times by 50% while ensuring scalability across testing and production environments.
- Implemented CI/CD pipelines with Jenkins to automate end-to-end workflows, which enhanced system testing efficiency and achieved a 98% deployment success rate for predictive monitoring models.
- Designed and deployed a Home Subscriber Server (I-HSS) integrating automation to process system logs, resulting in a 25% decrease in error detection time.
- Collaborated with cross-functional teams to develop scripts for real-time monitoring and anomaly detection, increasing system uptime and simplifying debugging efforts by 20%.

PROJECTS

Mitigating Bias in AI Hiring: A ChatGPT vs. DeepSeek Study **Jan 2025 - Present**
- Developed a framework to evaluate bias in Al-driven hiring to compare ChatGPT and DeepSeek rankings
- Applied de-biasing techniques - prompt engineering, fairness-aware ranking, and fine-tuning to mitigate bias
- Analyzed Al justifications, sentiment, and lexical emphasis to identify model-specific biases and advance ethical Al in hiring

Benchmarking of ML Algorithms to Predict Mortality in Sepsis **Jun 2024 - Present**
- Implemented and tuned AdaBoost, SVM, LDA, and Random Forest models, achieving 80% accuracy through a Voting Classifier
- Performed dimensionality reduction by implementing PCA, while preserving model performance
- Enhanced model reliability by addressing class imbalance with SMOTE and validating feature significance with ANOVA F-test

Self Correction in LLMs **Jun 2024**
- Conducted error analysis across GPT-4o, GPT-3.5, and Llama models, identifying cross-model bias in error classification
- Investigated jury-based self-correction mechanisms, focusing on partial and full consensus for error resolution
- Researched prompt refinement strategies to improve model prediction accuracy by analyzing positional bias and attention mechanisms

SKILLS

- **Languages**: Python, R, C, PHP, SQL
- **Tools**: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Keras, TensorFlow, Spark, Hadoop, Git/GitHub, Unix Shell, Ansible, Docker, Kubernetes, Jenkins, VCenter, AWS, Jupyter, Matlab, ETL
- **Methodologies**: Data Science, Statistical Modeling, Machine Learning, Data Analysis