

# JAYADITYAN SETHURAMAN

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## SKILLS

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**Languages:** Python, SQL, Bash, C/C++, RxJavaScript, Matlab, React.js

**Data & ML:** Pandas, NumPy, Scikit-learn, PyTorch, Tensorflow, Hugging Face, LangChain, DSPy, vector DBs, OpenCV

**Data Engineering:** ETL, Airflow, Apache Spark, Databricks, REST APIs

**MLOps:** MLflow, Weights & Biases, A/B testing, prompt & retrieval evaluation

**Cloud and Tools:** AWS, GCP, Docker, Podman, Linux/Unix, Git, Tableau, Jupyter, Regex, CI/CD, Ollama, Kubernetes

## EXPERIENCE

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### RTX: Collins Aerospace

*ML/AI Engineer*

**Cedar Rapids, IA, USA**

*May 2025 - August 2025*

- Architected ETL pipelines using Python and DSPy to enable Rapid Prototyping of machine learning models, aligning solutions with key business objectives in financial markets.
- Developed data processing workflows with Pandas and RAG, enhancing the accuracy of insights for financial markets and supporting strategic decision-making.
- Implemented MLflow for comprehensive logging of machine learning experiments, ensuring traceability while addressing evolving business objectives and financial data needs.

### Rutgers University

*Lead Researcher*

**Remote**

*September 2023 - May 2024*

- Drove advancements in deep learning model training by implementing innovative data science techniques, enhancing model accuracy and performance in various applications.
- Utilized clustering algorithms to segment complex datasets, facilitating targeted insights that informed strategic decision-making within financial research.
- Applied regression analysis in the development of data models, ensuring robust predictions and valuable insights for market research initiatives.

### Metro Analytics

*MBS Extern through Rutgers*

**Remote**

*September 2022 - December 2022*

- Drove forecasting initiatives by leveraging data mining techniques to enhance analytical insights, utilizing Tableau and SQL for effective data visualization in capital markets.
- Constructed advanced ETL pipelines that integrated diverse datasets, enabling robust data models that supported strategic decision-making in capital markets.
- Facilitated the adoption of machine learning methods to improve forecasting accuracy, significantly enriching data mining practices within the data science team.

## EDUCATION

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### Rutgers University

*Master's, Machine Learning*

**September 2024 - December 2025**

*GPA: 3.5*

### Rutgers University

*Bachelor's, Computer Engineering*

**September 2020 - May 2024**

*GPA: 3.5*

## PROJECTS & OUTSIDE EXPERIENCE

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### Raise-25 Hackathon

- Enhanced financial sentiment analysis by leveraging natural language processing techniques and TensorFlow, improving topic modeling accuracy by 18% using BERT embeddings and Hugging Face LLMs.
- Streamlined high-volume financial data analysis through zero-shot classification and NLI, enabling rapid insights into market trends and customer needs while optimizing ETL workflows.
- Accelerated project delivery by 30% during the Raise-25 Hackathon by effectively coordinating data science tasks and utilizing statistical analysis to prioritize critical data modeling initiatives.
- [Link to project](#)

### Large Language Model Distillation and Quantization

- Enhanced model efficiency by 80% and reduced model size by 50% by leveraging knowledge distillation and quantization techniques on BERT and RoBERTa, utilizing NumPy for optimized data processing.
- Increased model accuracy by 40% through advanced data modeling and statistics, integrating machine learning frameworks such as PyTorch, while supporting data pipelines on GCP and Azure.
- Streamlined project execution by coordinating teams and managing timelines, utilizing Azure for deployment and GCP for data analysis, ensuring effective communication in a fast-paced fintech environment.
- [Link to project](#)

## EXTRACURRICULAR

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**Ultimate Frisbee:** Captain of the Ultimate Frisbee team

**IEEE ML/AI Team**