

# Suryaprakash Uppalapati

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## EDUCATION

### George Mason University

Fairfax, Virginia.

M.S. in Computer Science

Expected Graduation, MAY 2026.

- **Concentration:** Machine Learning
- **Related Coursework:** Introduction to Artificial Intelligence, Computer Systems and System Programming, Mathematical Foundations of Computer.

## PROFESSIONAL EXPERIENCE

### Voluntary Research Assistant, George Mason University

August 2024 – December 2024

- Conducted data visualization research on geographic disparities in WVUA news coverage, utilizing Python libraries (Pandas, GeoPandas, Folium).
- Designed interactive and static maps to track trends across yearly categories, increasing insight generation speed by 20%.
- Identified underrepresented regions and proposed solutions using predictive ML models, leveraging GIS-based techniques.
- Presented research findings through detailed technical reports and visuals, influencing decisions for ongoing research initiatives.

## PROJECT EXPERIENCE

### Domain-Specific Language Model Fine-Tuning with Meta Llama 2

August 2024 – September 2024

- Fine-tuned Meta Llama 2 on AWS SageMaker for finance & healthcare, enhancing domain-specific accuracy by 30%.
- Leveraged optimization techniques like hyperparameter tuning to improve model performance and response time.
- Created a proof of concept (POC) as a knowledgeable consultant for real-time business queries, reducing manual lookup times by 40%.

### House Price Prediction

July 2024 – August 2024

- Built a regression model using TensorFlow to predict property prices based on location, size, and amenities.
- Processed and analysed datasets containing 10,000+ entries, achieving over 90% prediction accuracy.
- Developed a user-friendly interface for data input, reducing analysis time by 25%

### Big Data Analytics for Customer Insights

May 2024 – June 2024

- Analysed customer behaviour patterns from large datasets (1TB+) using PySpark and Hadoop.
- Improved ETL workflows, reducing processing time by 30% and increasing data retrieval efficiency.
- Delivered actionable insights to the marketing team via interactive dashboards stored in AWS S3

## ACTIVITIES AND LEADERSHIP

### Google Developers Club, George Mason University

Member

- Participated in hackathons and workshops, gaining expertise in Google Cloud and TensorFlow technologies.
- Mentored 10+ peers in coding practices, improving their understanding of Python and AI workflows.

### AWS DeepRacer Student AI-ML Competition 2024

Prequalified for the AWS AI & ML scholarship

- Ranked 22nd out of 316 in the US, 42nd in North America, and 364th globally.
- Optimized a reinforcement learning model for autonomous driving using AWS DeepRacer.

## TECHNICAL SKILLS

- **Programming:** Python (NumPy, Pandas, Matplotlib, Scikit-learn), C++, SQL
- **Operating Systems:** Linux, Windows
- **Data Engineering:** PySpark, Hadoop, Hive
- **Machine Learning:** TensorFlow, Keras, Amazon SageMaker
- **Visualization:** Matplotlib, Seaborn, Folium
- **Cloud Platforms:** AWS (S3, SageMaker, Bedrock), Google Cloud (Add specific services if used)
- **Version Control:** Git, GitHub
- **Tools:** Jupyter Notebook, PyCharm, VS Code

## CERTIFICATION

- **DeepLearning.AI:** Supervised Machine Learning: Regression and Classification
- **Udacity Certification:** Introducing Generative AI with AWS
- **AWS Academy Graduate:** AWS Academy Machine Learning Foundations
- **AWS Academy Graduate:** AWS Academy Cloud Foundations