

# Venkatesh Shanmugam

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[LinkedIn Profile](#) | [GitHub Portfolio](#) | [Personal Portfolio](#)

## SUMMARY

Machine Learning Engineer with 4+ years of experience building scalable **ML/DL algorithms** for edge devices, optimizing **video processing pipelines** and **audio pipelines** to enhance real-time performance. Proven expertise in **TensorFlow** and **PyTorch**, with hands-on experience deploying models on edge hardware like Jetson Nano. Currently pursuing an M.S. in Computer Science, with a research background in implementing technical papers for multi-modal CNN/RNN architectures. Achieved 78% ROC-AUC in production models while reducing infrastructure costs by \$6K annually.

## WORK EXPERIENCE

**Founding Machine Learning Engineer** | ScriptChain Health | *Washington, DC*

- May 2024 - Present\*

**Machine Learning Engineer** | Tata Consultancy Services | *Chennai, India*

- Apr 2021 - Aug 2023\*
- \*EDUCATION
- \*George Washington University | Washington, DC
- Aug 2023 - May 2025\*

**SRM University** | *Chennai, India*

- Aug 2016 - May 2020\*

## TECHNICAL SKILLS

**Programming Languages:** Python, C++, SQL, Java, Bash

**ML Frameworks & Libraries:** TensorFlow, PyTorch, scikit-learn, Keras, Transformers, DeepSpeed

**MLOps & Cloud:** AWS (SageMaker, EC2), GCP (Vertex AI), Docker, Kubernetes, CI/CD, MLflow

**AI Specializations:** Deep Learning, CNN/RNN, NLP, Computer Vision, Multi-modal Models, Edge Devices (Jetson Nano)

**Data Engineering:** Apache Spark, Kafka, Airflow, ETL Pipelines, Distributed Training, Model Optimization

## PROJECTS

**Agentic Graph RAG for Building Codes** | *Multi-modal AI, Edge Optimization*

[AI-Text Discriminator](#) | *NLP, Model Efficiency*

## EDUCATION

**Master of Science in Computer Science (3.81 / 4.0)**, George Washington University

*August 2023 - May 2025*

**Bachelor of Technology in Computer Science (3.5/4.0)**, SRM University

*August 2016 - May 2020*