Tejas Ramesh

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Education

George Mason University May 2029 (Expected)
Doctor of Philosophy in Computer Science

George Mason University May 2025
Master of Science in Computer Science *GPA: 3.89/4.0*

College of Engineering Guindy,Anna University April 2021
Bachelor of Engineering in Computer Science and Engineering *GPA: 3.39/4.0*

Relevant Coursework

Courses: Machine Learning, Big Data Analytics, Operating Systems, Analysis of Algorithms, Software Engineering, Object-Oriented Programming, Data Structures, Calculus, Probability and Statistics, Principles of Management

Skills and Certifications

Languages: C/C++, Python, SQL, Java, Bash, MongoDB Query Language (MQL)
Tools: Git/GitHub, MS Excel, Hive, Oozie, Databricks, Jupyter, Tableau, Power BI, Amplitude, Putty

Certifications: IBM-Data Science Professional Certification, AI Engineering Professional Certification, Applied AI Professional Certification

Projects

Triton-Viz: A Visualization Toolkit for GPU Programming on Triton Link | *Python*

- Triton-Viz is an innovative GPU Programming Visualization Tool developed to enhance the understanding of GPU operations through Triton, a programming language by OpenAI.
- This tool offers valuable insights into kernel execution, memory management, and the optimization of parallel algorithms.
- The tool visualizes fine grained tensor operations across multiple blocks enabling users to understand how their custom GPU kernel gets executed in the backend.

Papers

Tejas Ramesh, Alexander Rush, Xu Liu, Binqian Yin, Keren Zhou, Shuyin Jiao. *Triton-Viz: Visualizing GPU Programming in AI Courses.* In The Technical Symposium on Computer Science Education (SIGCSE TS), 2025

Experience

Department of Computer Science-George Mason University | *Student Researcher* March 2024 – Present

Large Language Models (LLMs)

- Performance benchmarking serial and parallel C/C++ codes.
- Comparing performance enhancements suggested by static code analyzers with those of LLMs.
- Focused on building LLM agents that tackle Natural Language (NL) Intent to Code generation tasks in the High performance Computing (HPC) Domain.
- Implemented a capable NL-bash command LLM based on Code Llama by Meta.

Tensors and Visualization

- Conducting research on simplifying AI education.
- Visualizing fine grained Tensor operations of kernels written on Triton (developed by OpenAI) in a highly abstracted GPU programming backend execution. Helping in better understanding of AI algorithms.

LatentView Analytics Ltd. | *Analyst* August 2021 – July 2023

Worked with the Email Marketing and Product Analytics team of a Major American software giant from San Jose,CA.

- Created and maintained multiple business dashboards to track KPIs that solved business problems.
- Analyzed various aspects of user's product engagement and conducted full fledged customer journeys.
- Automated multiple workflows in Hive and Databricks using Python.

Achievements: SPOT Award X 1, Encore Award X 1