Srivathsan Srinivasagopalan (Sri)

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Home Page   Google Scholar Profile

Summary

- Gravitate towards hard/high-risk problems that have (immediate) practical use.
- 15+ years of work experience in various startups and large enterprises.
- Machine Learning projects from paper → rapid-prototypes → production.

Technical Skills

- [**Ph.D. Work**] Network design algorithms, approximation schemes and graph theory.
- Python, Machine Learning, Docker, AWS, Databricks, Sagemaker, SQL, PySpark and Dask.
- CNN, GAN, Graph NN, Reinforcement Learning and use of LLMs.
- 10+ years of Python, machine learning + (sklearn, TensorFlow, PyTorch)
- LangChain and document querying processes including: document loading, splitting, embedding via task appropriate LLM; vectorstore indexing and storage; retrieval via task appropriate LLM; and prompt engineering.
- Advanced usage of generative AI to implement LLM processes, LLM-finetuning, to generate specific task-relevant data reports and summaries for end users based on their queries.
- Deep understanding of Bert, Bart, LoRA, PEFT and RLHF techniques.

Education & Research

15+ conference publications, 4 book chapters, 2 journal publications and several invited talks.

Udacity Courses

Deep Learning and Artificial Intelligence Nanodegrees   Apr & Oct 2018

Louisiana State University   Baton Rouge, LA
Ph.D., Computer Science (Approximation algorithms and graph theory)   Aug 2006 - May 2011

Oak Ridge National Laboratory   Oak Ridge, TN
Research Intern (Computer Science and Mathematics Division)   Summer 2007

Industrial Experience

Aura Labs   Austin, TX
Principal Machine Learning Engineer, Aura Labs   March 2023 - Aug 2023

- Spearheaded the end-to-end development of question-answering system (Gen AI) for internal use.
- Used LLMs and fine-tuned LLMs for summarization, topic-modeling and sentiment analysis.
- Scaled the system to process millions of texts and with high-availability.

AT&T [AlienVault Inc acquisition]   Austin, TX
Principal Machine Learning Researcher, Alien Labs   July 2016 - Nov 2022

- Cybersecurity Use Cases + Stats/Machine-Learning

- Botnet C&C detection: New TDR (Threat-Detection and Response) revenue-stream.
    - Shrinked threat/forensic-investigation times by $\sim 60\%$ [ML + Rules].
  - Anomaly Detection: Interesting traffic patterns in netflow.
  - Malware clustering, malware capabilty prediction, alarm-suppression.
- End-to-End ML pipelines using Python, Airflow, Terraform, Bash, Databricks and MLFlow and its ecosystem.
- Hands on development of ETL processes, caching and developing robust and resilient distributed systems.
- OTX enrichment - Detection of DGA, IDN Homoglyph Attacks (for domain-similarity detection), obfuscated commands, file-type classification, report analysis using NLP, auto-rules generation.
- *Familiar* with various SIEMs, EDR/XDR platforms, MITRE TTPs and logging platforms.

- Worked at Lacework, Cognizant (Clients: Visa Labs, Symantec, American Express), ThinkBigAnalytics on statistical learning for various clients. Prior to Ph.D., I worked at a few telecom startups where I had been a core developer from early stages.   1999-2006, 2011-2016

- 4 patents granted, 2 more pending all in the area of cybersecurity + machine learning.