Trisanth Srinivasan

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Summary

Innovative Machine Learning Researcher, Full-Stack Developer, and Founder with extensive experience in ethical, high-impact ML solutions and scalable systems. Proven leader adept at merging advanced AI techniques with robust infrastructure to drive real-world impact. Experienced in cross-functional collaboration and delivering transformative projects in both research and production environments.

Experience

Researcher | Part-Time Mar 2025 – Present
NYU Tandon School of Engineering, mLab, Remote

- Co-authoring a groundbreaking paper on internet content filtering in K-12 schools with an emphasis on privacy.
- Analyzing technical frameworks and policies to assess privacy risks and content control in educational networks. Reverse engineering and analyzing various enterprise solutions.
- Conducting evaluations to support policy recommendations for improved digital privacy.

Machine Learning Researcher | Full-Time Feb 2025 – Present
Cyrion Labs, Remote

- Co-founded a 501(c)(3) lab dedicated to ethical, high-impact ML research. Funded by SMU, Google, Beal Bank, etc
- Developed GANs for data augmentation, significantly improving model robustness in low-data scenarios.
- Applied advanced hyperparameter tuning (Bayesian optimization, evolutionary algorithms) to boost model performance.
- Leveraged Docker and distributed GPU computing to reduce inference latency by up to 5× while scaling experiments.

Co-Founder & Lead Developer | Part-Time Dec 2024 – Present
Extracurriculars.com, Remote

- Launched a platform connecting high school students to diverse extracurricular opportunities.
- Integrated an AI-powered recommendation system using TensorFlow and PyTorch for personalized learning experiences.
- Deployed a full-stack solution (Next.JS, TypeScript, FastAPI) with Docker, ensuring high availability.

Full Stack Developer | Part-Time Nov 2024 – Feb 2025
ScienceFair.io, Remote

- Developed large parts of a high-scale SaaS platform, contributing to a six-figure acquisition offer. (100k+ users)
- Developed an extensible microservices architecture with event-driven design.
- Built an AI-driven support agent and streamlined API gateway integrations.

Founder & Lead Developer | Full-Time Dec 2021 – Aug 2023
Nova, Remote

- Developed an open-source suite of privacy tools (VPN, DNS, email, web-proxy) serving 850K monthly users.
- Collaborated with cybersecurity experts to integrate robust encryption and multi-factor authentication.
- Managed a distributed server cluster and led a team of 10 developers in agile product cycles.

Publications

- **GenECA: A Generalizable Framework for Real-Time Multimodal Embodied Conversational Agents with Emotion-Sensitive Interaction**
  Santosh Patapati, Trisanth Srinivasan
  Introduces the development of a robust and generalizable framework for multimodal interactions with Embodied Conversational Agents (ECAs). *Demo, Accepted CVPR 2025 Demo Track*

- **WebNav: An Intelligent Agent for Voice-Controlled Web Navigation**
  Trisanth Srinivasan, Santosh Patapati
  Introduces a voice-controlled navigation agent using a ReAct-inspired architecture and generative AI. Outperforms traditional screen readers in response speed and task accuracy, offering an innovative solution for the visually impaired. *Preprint, arXiv:2503.13843, Pending Publication*

Awards and Honors

- **2025, Third Place, Dallas Regional Science and Engineering Fair** – Awarded for "ViZ: Navigation System for the Visually Impaired. $100 Grant
- **2025, Texas DECA International Qualifier** – Recognized in Financial Services Team Decision Making.
- **2024, First Place, Emerson High School Programming Competition**
- **2024, 2025, Texas DECA State Qualifier (x2)** – Advanced in Financial Analysis and Food Marketing.
- **2024, College Board AP Scholar with Distinction**
- **2019, Commendation from the Mayor of Torrance, CA** – For leading impactful environmental preservation initiatives.

Notable Projects

Vega: Web-Proxy Detection Framework | Python, JS, Web Tech Aug 2024 – Present

- Developed a multi-tier framework for detecting sophisticated proxy circumvention techniques in educational networks.
- Integrated JavaScript scanning, service worker analysis, and network traffic monitoring with adaptive caching to enhance efficiency.

VIZ: Navigation System for the Visually Impaired | Python, C++, AI Aug 2024 – March 2025

- Created a dual-module system combining LiDAR-equipped hardware with a digital navigation module powered by generative AI.
- Implemented a modified ReAct architecture and vector databases for real-time scene analysis and improved user guidance.

PLVA: Privacy Layer Model for Visual Web Agents | Python, Selenium, Deep Learning Jan 2025 – Present

- Developed an automated framework to detect and obscure privacy threats in web imagery.
- Fine-tuned object detection models (YOLOv8, Faster R-CNN) and designed dynamic masking algorithms to balance clarity and obfuscation.

Technical Skills

Languages: Python, Typescript, C++, Java, HTML/CSS, Google App Scripts

Frameworks & Libraries: Django, React, NextJS, FastAPI, Flask, PyTorch, TensorFlow

Tools: Git, Docker, Kubernetes, Redis, OpenCV, Numpy, Pandas, Postgres, Supabase, Linux, Jupyter, VS Code