SUBRAMANIYA SIVA T S

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SUMMARY

Master's student in **Data Science at Michigan State University** with **3 years of industry experience** in **Deep Learning, Computer Vision, NLP, and LLMs**. Passionate about building scalable ML systems and applying cutting-edge research to real-world challenges.

EDUCATION

Michigan State University, USA | *MS in Data Science* **| GPA: 4.0**   *August 2023 - April 2025*
   Achievements: Won Techsmith award in SpartaHack among 600 participants

Indian Institute of Technology Roorkee (IITR), India | *B.Tech in Mechanical Engineering*   *July 2016 - June 2020*
   Achievements: Best B.Tech Project of the year 2020 award.

PROFESSIONAL EXPERIENCE

Inito Inc | *Data Science Engineer*   *May 2021 - June 2023*
- Spearheaded the development and fine-tuning of 20+ custom deep learning models for classification, detection, and segmentation tasks, serving over 1 million monthly users. Utilized Detectron2, mmdet and YOLOv8 proficiently for diverse computer vision tasks.
- Designed and implemented the "Model Cascader" framework for dynamic deep learning model execution using GCP's Vertex AI. Set it as the gold standard for all subsequent deployments, achieving a remarkable 90% reduction in false positives in our flagship product.
- Implemented Temporal Fusion Transformers to forecast ovulation in users based on their hormone patterns. This resulted in enriched user personalisation and a 30% increase in predictive accuracy.
- Leveraged Alphafold, a DL-based protein folding model, to bolster enzyme docking stability, amplifying prototyping efficiency by 5x.
- Crafted 20+ insightful Elastic dashboards for data-driven decision-making, facilitating informed strategic choices for stakeholders.
- Managed over 10 project repositories, datasets, and model versions, ensuring seamless production deployment, and supervised a team of 4 Data Analysts, enhancing data preprocessing and analysis initiatives.

Inito Inc | *Systems Engineer*   *August 2020 - April 2021*
- Engineered an AI-powered hormone UV test strip reader using YOLO & EfficientNet, achieving a 10x improvement in precision over conventional methods.

Indian Institute of Science (IISc) | *Research Intern*   *May 2019 - July 2019*
- Performed simulation and mathematical modeling of composites such as MFC and RFD, optimizing material properties for engineering applications.

PROJECTS

Speaker Diarization | [MSU Spartahack Award](#)   *January 2024 - February 2024*
- Designed an innovative web app aimed at enhancing virtual meeting efficiency on platforms like Zoom and Google Meet.
- Applied contour detection for speaker identification and used Tesseract OCR to extract participant names with timestamps.
- Integrated OpenAI's Whisper model for accurate voice-to-text conversion and the BART model for summarizing transcriptions, boosting meeting efficiency and engagement. [code](#)

3D Object detection and Scene Reconstruction for Navigation | MSU (**Best Project**)   *August 2024 - December 2024*
- Developed a 3D reconstruction framework using ScanNet data, integrating MiDAS for depth estimation, YOLOv8 Nano for object detection, and Mobile SAM for instance segmentation.
- Generated detailed 3D object maps and bird's-eye view grids to support optimal path planning for obstacle-free navigation. [code](#)

Flight Graph Insights   *February 2025 - March 2025*
- Built an end-to-end graph analytics system for flight data using ArangoDB, NetworkX, and LangChain, supporting both AQL and Python-based querying. Designed a hybrid LLM agent to handle complex natural language queries through task decomposition.
- Developed an interactive Gradio UI with GPU-accelerated visualizations and real-time chain-of-thought logs. [code](#)

SKILLS

Computer languages: Python, C++, Java, JavaScript, MATLAB, R, SQL
Software/Frameworks: TensorFlow, PyTorch, Keras, Scikit-learn, Hugging Face Transformers, spaCy, NLTK, Tesseract OCR, LangChain, LangGraph, OpenCV, Blender, matplotlib, Pandas, Flask, VSCode, CI/CD, CUDA, Docker, ElasticSearch, Gradio, Git
Data & Cloud Platforms: Google Cloud Platform (Vertex AI, Cloud Functions, App Engine, Firestore, SDK), AWS, Azure DevOps
Relevant courses: Large Language models (LLM), Computer Vision, Natural Language Processing, Programming and data structures
Certifications: DeepLearning Specialization (MOOC), NLP Specialization (MOOC)