

SURYAVARDAN SURESH

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Education

New York University (Graduate School of Arts and Science)

Aug 2023 - May 2025

MS in Computer Science (Courant)

GPA: 4.00

Indian Institute of Information Technology (IIIT) Sri City

Aug 2019 - May 2023

B.Tech in CSE with Honors (Transfer Learning and GANs)

GPA: 8.96

Skills

Technical Skills: Python (Pytorch, Tensorflow, Numpy, Matplotlib, Django etc.), Matlab, Java (MERN), SQL, C/C++, HTML/CSS/JS/Bootstrap, Github

Coursework: [MS] Conceptual Gaps in Modern ML, Cloud and ML, Predictive Analytics, OS, Fundamental Algorithms, [B.Tech] ML, NLP, OOPS, DSA, Web Development, Adv. Engineering Mathematics, Communication Skills, DBMS etc.

Certifications: Deep Learning Specialisation, Build Better GANs, Natural Language Processing, Web Development for Everybody, Machine Learning with Python

Experience

Artificial Intelligence Institute of UofSC

Aug 2022 - Present

Research Intern

Deep Learning, Python, Tensorflow

- Worked on developing Joint Embeddings for multi-modal data. The presented model beats SOTA on three tasks i) Image Captioning, ii) Text-based-Image retrieval and iii) Image2Tweet. I contributed to the model pipeline and specifically focused on the Image captioning task, which improved previous BLEU score by 6%. This led to the following paper: (**IMAGINATOR: Pre-Trained Image+Text Joint Embeddings using Word-Level Grounding of Images**)

Wipro AI Lab

Apr 2021 - Aug 2022

Research Intern

Data Science, Deep Learning, Python, PyTorch

- Lead Organizing Committee for the annual De-Factify workshop 🌀 at the AAAI conference. This involved task formulation, data collection, cleaning, organization, annotation, analysis, baseline model creation, participants' paper review and conference presentation.
- Majorly worked on and presented the Factify shared task - aimed at combating multi-modal fake news propagation on social media. Curated 100,000 tweets and news articles supporting or refuting these tweets across 5 classes based on their relative entailment. More about this in: (**FACTIFY: A Multi-Modal Fact Verification Dataset @ AAAI 2022**)
- At AAAI-24, we revamped the task with two new shared tasks with my focus on the Factify5WQA task i.e. a dataset of size 15,000 annotated with the goal of aiding a claim v/s document comparison as per the 5W framework for question-answer-based fact explainability.

TechCiti Software Consulting PVT LTD

Jul 2020 - Aug 2020

ML Intern

Scikit-learn, Python, Django

- Designed a web based Loan application and approval prediction project with a 78% accuracy, after receiving training as part of the internship. Supported the PM with data cleaning and model selection.

Projects

Honors Research - B.Tech | *Tensorflow, Matlab, Research*

- Proposed a novel variant of Generative Adversarial Nets (GANs) to study the impact of synthetic data on the performance of traditional Unsupervised Domain Adaptation algorithms. Out of the 80 tasks defined under existing SOTA algorithms, we show improvement on 62% of them. This work was presented at the ICONIP-22 conference, publication: (**Unsupervised Domain Adaptation Supplemented with Generated Images - ICONIP 2022**)

Deep Learning | *Pytorch, Langchain, Tensorflow, HPC*

- Pioneered a QnA-chatbot on LENR-research data and compared performance of SOTA open-source LLMs with grid search on parameters, under the supervision of Prof. Anasse Bari and Prof. David Nagel [ongoing paper]
- Achieved 93% validation accuracy on the Roman Dialect Identification VarDial NLP shared task
- Earned top 15 percentile in the Deep Learning bootcamp 🌀 conducted by DPhi

Metro Simulation 🌀 | *Agent-based modelling, Netlogo*

- Created an ABM tool for simulation and evaluation (congestion, wait-time) of any city's metro architecture - with provision for excel input data (routes, passenger count). Conducted a study using the Washington DC metro data

Web Development | *React, Node.js, MongoDB, REST API, Docker, Django, SQL, JS, Bootstrap*

- Designed ShoeBox 🌀, an e-commerce website for shoes with a social media aspect added to it. Used APIs for pagination, filtering, Redux, documentation etc.
- Developed a end-to-end Donation Platform 🌀 for the sem project, including Admin, Donor and NGO modules