ANUGYA SRIVASTAVA

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WORK EXPERIENCE

NYU Steinhardt, Data Scientist **July 2023 – Jan 2024,** *New York, NY*

- Leveraged statistical analysis and data science concepts and tools to design and run causal inference studies in R
- Research various aspects of human computer interaction and evaluation frameworks for web based analysis tools

Amazon, Software Engineer **Feb 2023 - July 2023,** *New York, NY*

- Built authentication and authorization service tenants using DynamoDB for seamless interfacing between APIs
- Added robust testing frameworks for alarming on faults and failures and create tracking dashboards for the same

Vimaan Robotics, Machine Learning Engineer **Jan 2020 – Dec 2020**, *Bengaluru, India*

- Made substantial contributions to the advancement of the deep learning pipeline, effectively tackling intricate tasks such as activity recognition, detection, and segmentation. Notable accomplishments include comprehensive data analysis, pipeline design, exhaustive exploration of model architectures, and the proficient training of high-caliber models.

Nomoko AG, Machine Learning Engineer **Jan 2019 – Jan 2020**, *Zurich, Switzerland*

- Conducted an in-depth exploration of semantic and instance segmentation techniques, such as Mask R-CNN, and applied it to densely detailed aerial imagery of urban landscapes. Additionally, I innovatively engineered and deployed a semi-automatic annotation utility for the precise collection of pixel-level annotations, leveraging Deep Extreme Cut to drastically reduce user involvement.

PROJECTS

How Much Do Large Language Models Naturally Understand a Clinical Setting? **Sept 2022 – Dec 2022**

- Evaluated performance of LLMs across different medical domains and their ability to answer clinical questions with complex answers.

Red Teaming Language Models with Language Models **Jan 2022 – May 2022**

- Evaluated the red teaming approaches - from zero-shot to reinforcement learning - discussed in Perez et. al. (2022) for smaller, publicly available language models.
- Developed a test-case generation pipeline that is optimized towards eliciting offensive responses from various language models and identified various failure modes of commonly used LLMs.

Nutritional labels for Automated Decision Systems **Jan 2022 – May 2022**

- Audited a patient survival prediction system to develop an understanding of features that are instrumental in making such a high-stakes prediction. Examined the interpretability of feature importances learnt by the model, as well as the fairness and bias of its predictions.

OOD Detection on Natural Adversarial Examples **Sep 2021 – Dec 2021**

- Evaluated state-of-the-art OOD-detection models on the newly released Natural Adversarial Examples dataset. Additionally, the project goal also included finding the relationship between dataset characteristics, OOD definition(s) and the OOD-detector's performance.

Causal Inference for measuring DEI Support **Sep 2021 – Dec 2021**

- Used Bayesian additive regression trees and propensity score based approaches for estimating the effect of people's beliefs on poverty on their opinion of diversity and inclusion policies.

Causal Effect Estimation using LODE **Jan 2021 – May 2021**

- Applied LODE for causal effect estimation in the case of functional confounders like Sepsis. Estimated the effect of various treatment(s) on patients with Sepsis of varying intensities. Evaluated various survival analysis models on the MIMIC dataset.

EDUCATION

Courant Institute of Mathematical Sciences, NYU, MS Computer Science **December 2022**

- Machine Learning, Causal Inference, Responsible Data Science, Natural Language Understanding, Deep Learning, Deep Reinforcement Learning, Computer Vision and more.

Manipal Institute of Technology, B.Tech, Computer Engineering (Minor in Soft Computing) **October 2019**

- Data Mining and Predictive Analytics, Pattern Recognition, Neural Networks and Fuzzy Logic, Human Computer Interaction and more.

SKILLS

Programming Languages: Python, R, SQL, C++, C, HTML, CSS, JavaScript, TypeScript, Java
Deep Learning Frameworks: PyTorch, Tensorflow, Keras, Jax
Systems and Softwares: Tableau, Power BI, Unix-like environments, AWS, GCP, Git, LaTeX, Jira, Confluence