TANMAY AMBADKAR

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EDUCATION

M.S, Computer Science and Engineering, The Pennsylvania State University Expected May 2024
GPA: 3.9

EXPERIENCE

Dept. of Industrial and Manufacturing Engineering, The Pennsylvania State University
Research Assistant May 2023 - August 2023

- Working on Clinical Data (Electronic Health Records) to predict Autism Spectrum Disorder within 24 months from birth.

Siemens Technology and Services
Research and Digitization Automation Intern January 2022 - July 2022

- Detecting anomalies in data using AutoEncoders and using explainable AI to identify which features contribute to the anomalies. Developed a plug-and-play library with multiple layers of abstraction to protect intellectual property.
- Adding models and modifying workflows to a library to realize time-series end-to-end workflows for training and inference, with a 0.98 r^2 score.
- Explored data and created initial time-series forecasting models using CNNs for Starbucks data to forecast into the future with only 10000 training samples.

Siemens Technology and Services
Research and Digitization Automation Intern May 2021 - July 2021

- Worked on the Industrial Predictive Analytics Engine, Integrated workflow creation, and monitoring tools, which improved the existing architecture and maximized efficiency by running workflows in parallel, decreasing execution time by 30%.
- Maintaining and upgrading a library for realizing model training workflows for time-series datasets.

PUBLICATIONS

[1] Tanmay Ambadkar, Pramit Mazumdar, "Deep reinforcement learning approach to predict head movement in 360° videos" in Proc. IS&T Int'l. Symp. on Electronic Imaging: Image Processing: Algorithms and Systems, 2022, pp 367-1 - 367-5, https://doi.org/10.2352/EI.2022.34.10.IPAS-367 |

[2] N. Menon, S. Saboo, T. Ambadkar and U. Uppili, "Discrete Sequencing for Demand Forecasting: A novel data sampling technique for time series forecasting," 2022 International Conference on Intelligent Data Science Technologies and Applications (IDSTA), San Antonio, TX, USA, 2022, pp. 61-67, doi: 10.1109/IDSTA55301.2022.9923044.

[3] Tanmay Ambadkar, Jignesh S. Bhatt, A Simple Fast Resource-Efficient Deep Learning for Automatic Image Colorization in "31st Color and Imaging Conference" |

PROJECTS

Deep Learning Research projects

- **GenerativeImage2Text** | : Added a modified training loop and trained model on a smaller dataset with a different loss function to achieve similar results as the original paper.

SKILLS

Programming Languages	Python, Java, Javascript, C, HTML, CSS
Frameworks & Libraries	PyTorch, TensorFlow, Sklearn, Pandas, Django, Flask
Soft Skills	Communication, Planning, Leadership
Languages	English (TOEFL: 108), Hindi, Marathi