

Anugunj Naman

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EDUCATION

Purdue University

Masters of Science in Computer Science, GPA: 3.6/4.0

West Lafayette, IN

May 2025

Indian Institute of Information Technology

Bachelor of Technology in Computer Science, GPA: 8.9/10.0

Guwahati, India

May 2022

PUBLICATIONS

- **Anugunj Naman**, Gaibo Zhang
FAST: Fast Audio Spectrogram Transformer
50th IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2025
- **Anugunj Naman**, Aaron Ault, Yaguang Zhang, James V. Krogmeier
Automating Work Orders and Tracking Winter Snow Plows and Patrol Vehicles with Telematics Data
104th Transport Research Board (TRB) Annual Meeting, 2025
- **Anugunj Naman**
Customized Style Transfer using Discrete Sampling
1st EMNLP Workshop on Customizable NLP (CustomNLP4U), 2024
- Thu Bui, **Anugunj Naman**, Carola-Bibiane Schönlieb, Bruno Ribeiro, Beatrice Bevilacqua, Moshe Eliasof
Random Propagations in GNNs
2nd NeurIPS Workshop on Unifying Representations in Neural Models (UniReps), 2024
- **A. Naman**, K. Deepshikha
Indic Languages Automatic Speech Recognition using Meta-Learning Approach
4th International Conference on Natural Language and Speech Processing (ICNLSP), 2021
- C. Suman, **A. Naman**, S. Saha and P. Bhattacharyya
A Multimodal Author Profiling System for Tweets.
IEEE Transactions on Computational Social Systems (IEEE TCSS), 2021

EXPERIENCE

Purdue University

Graduate Research Assistant

Jan 2024 – Present

- Designed and developed a web application for the Indiana Department of Transportation (INDOT) to manage, verify, and create work orders for snow and patrol fleets, leveraging real-time GPS data for improved operational efficiency.
- Automated the manual work order process, significantly reducing administrative overhead and enhancing the accuracy of fleet management through real-time tracking and streamlined workflows.
- Collaborated under the INDOT SPR-4605 (Telematics-Enabled Record Keeping) grant, delivering a robust system that integrated telematics data for precise record-keeping and fleet performance monitoring.

Elevance Health Technologies

Software Engineer

Jan 2022 – Jul 2023

- Led the design and deployment of an advanced machine learning (ML) model training and monitoring library tailored for production environments. Focused on improving fraud detection and data drift mitigation, resulting in a 20% improvement in key model performance metrics.
- Engineered a scalable and comprehensive ML library to ensure model fairness, transparency, and explainability, serving as a critical tool for internal model evaluation prior to production deployment.

- Designed and prototyped an insurance document QA chatbot leveraging OpenAI's ChatGPT, enhancing the accuracy of customer query understanding by 25%, improving user experience and customer satisfaction.

HuggingFace

Jan 2022 – Jul 2022

Open Source Engineer

- Contributed to the integration of Microsoft Research's CvT: Convolution Vision Transformers into a widely-used open-source transformers library, enhancing its capabilities for vision-based deep learning models.
- Integrated Meta AI Research's LeViT: A Vision Transformer in ConvNet's Clothing for Faster Inference into a popular open-source transformers library, optimizing the library for faster and more efficient vision model inference.

NVIDIA

Aug 2020 – May 2021

Machine Learning Intern

- Developed and implemented data augmentation techniques for images using generative models as part of a research initiative, leading to a 2% improvement in performance metrics.
- Engineered speech-to-text models for Indic languages in low-resource environments as part of a research project, significantly closing the performance gap with monolingual models.

PROJECTS

Track Patch | *Typescript, ReactJS, Git, CI/CD*

Sept 2024

- Developed a web application for the Indiana Department of Transportation (INDOT) to manage and automate work orders for snow and patrol fleets using real-time GPS data.
- Enabled dynamic tracking and verification of fleet activities, reducing manual errors and improving operational transparency.
- Automated the creation and management of work orders, leading to a more efficient and streamlined process, significantly reducing administrative time.

PATH: Pavement Assessment Tracking and Health | *Python, Tensorflow, React Native*

May 2020

- Runner-up at the Grand Finale of Smart India Hackathon 2020, competing among top teams nationally.
- Developed an innovative deep learning model to detect road surface defects, such as cracks and potholes, using smartphone cameras, enabling cost-effective infrastructure monitoring.
- Created an advanced algorithm to generate objective pavement condition scores from captured footage, providing a data-driven approach for assessing road quality.
- Designed a mobile application for engineers, allowing for seamless data collection, real-time analysis, and report generation, streamlining the road inspection process on the go.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL (MySQL), Typescript

Frameworks: PyTorch, Tensorflow, ReactJS

Developer Tools: Git, Docker, VS Code, Jenkins, JIRA, Bitbucket

Libraries: pandas, NumPy, matplotlib, scikit-learn, transformers