Aniket Biswal

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EDUCATION

Purdue University | West Lafayette, IN *Aug. 2022 – Dec. 2025*

Bachelors of Science: Computer Science (Machine Intelligence Concentration) | **Mathematics** | **Data Science**

- **GPA**: 3.6/4.0 | **Honors**: Dean's List (4x), Semester Honors (4x)
- **Relevant Coursework:** Data Structures and Algorithms, Machine Learning and Data Mining, Probability, Statistics, Systems Programming, Computer Architecture, Linear Algebra, Discrete Math, Object-Oriented Programming in Java, Programming in C

TECHNICAL SKILLS

Languages: Python, Java, C/C++, MATLAB, R, Assembly, JavaScript, HTML/CSS
Frameworks and Libraries: Tensorflow, PyTorch, scikit-learn, XGBoost, NodeJS, React, MongoDB
Softwares and Cloud Platforms: Microsoft Azure, Jupyter, Google Firebase, Github, Linux, Visual Studio Code

PROFESSIONAL EXPERIENCE

Software Engineering Intern | Carmel, IN (Remote) *Aug. 2024 – Present*
Midcontinent Independent System Operator (MISO)

R&D Machine Learning Intern | Carmel, IN *May 2024 – Aug. 2024*
Midcontinent Independent System Operator (MISO)

- **Intern Data Challenge Winner:** Led a group of 4 interns to win MISO's "Intern Data Challenge", where we were tasked with presenting predictive analysis of several given data sets to a panel of judges in 1 week's time
- Built a NeuralProphet model and a SARIMAX model from scratch using aggregated historical time series data of energy demand to forecast future demand in different regions
  - Reduced error by ~16% compared to current forecasting techniques used in the company
- Implemented grid search and Bayesian optimization to tune hyperparameters and reduce error metrics such as RMSE
- Used Dynamic Time Warping (DTW) to then cluster the datasets into smaller groups in order to improve global modeling performance of both models
- Leveraged Microsoft Azure ML Studio to access Blob storage data, write and test machine learning models

Undergraduate Researcher | West Lafayette, IN *June 2023 – Dec. 2023*
Under direction of Dr. Berkay Celik, Associate Professor of Computer Science, Purdue School of Science

- Recreated neural scene representations and computer image renderings from prior research articles with a Generative Query Network (GQN) built using PyTorch
- Applied renderings to autonomous vehicles to increase efficiency in landscape generation and trajectory projection

Prior Researcher | West Lafayette, IN *Aug. 2020 – Sep. 2021*
Under direction of Dr. Partha Mukherjee, Associate Professor of Mechanical Engineering, Purdue School of Engineering

- Created nonlinear regression models using MATLAB software to model experimental data of differential scanning calorimetry for different electrolytes in sodium ion batteries
- Analyzed thermal stability of sodium-ion battery electrodes and collaborated with 6 PhD students

PROJECTS

Purdue Robotics Club Website Development *Sep. 2023 – May 2024*

- Collaborated with a team on the comprehensive redesign of the Purdue Robotics Club (Purdue ARC) website, employing HTML, CSS, and React for a dynamic user experience
- Contributed to the development of a back-end registration form for the 2024 Robotic and Intelligent Systems Expo (RISE), facilitating participation from companies, labs, and clubs through a secure Google Firebase server for data collection and storage
- Websites: https://www.purduearc.com, https://www.rise.purduearc.com

Machine Learning at Purdue (ML@P) *Jan. 2023 – Aug. 2023*

- Collaborated on a team to develop a Generative Adversarial Network (GAN) to diagnose medical issues from eye images using capabilities from Tensorflow
- Collaborated with a different team to create a chatbot using an innovative transformer model for our discord channel
- Used Zero Shot Classification from Hugging Face to generate API calls for the chatbot and classify new inputs

ADDITIONAL EXPERIENCE AND AWARDS

American Invitational Mathematics Exam (AIME) Qualifier *Mar. 2018 – Mar. 2022*

- 5-time qualifier for AIME, highest score of 10/15

National Mathcounts Qualifier *May 2018*