

KAARTIKEYA PANJWANI

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Education

New York University, New York, NY
Master of Science, Computer Science

May 2025

Vellore Institute of Technology, Tamil Nadu, India
Bachelor of Technology, Computer Science and Engineering

Aug 2023

Experience

Software Developer, NYU Courant Institute of Mathematical Sciences, New York, USA May 2024 – Dec 2024

- **Spearheaded** the development of the **AI4Health website** using **React, HTML, CSS, and WordPress**
- **Collaborated** with designers and backend developers to **create seamless and visually appealing user interfaces**
- **Implemented** responsive design principles and dynamic content to **ensure optimal performance** across various devices and browsers
- **Conducted** thorough **code reviews** and testing to uphold high standards of code quality and functionality
- **Utilized** project management tools to **track progress** and **meet deadlines** efficiently

Web Development Project Lead, Namhya Foods, Gurugram, India

Jan 2021 – Jul 2023

- **Developed** the website for the venture for their online market using **HTML, CSS, Javascript, PHP** and Shopify that increased their sales by **1.8x**
- **Expanded** my role as **advisor** to the development team and **spearheaded** the project, applying search engine optimization and social media marketing that **increased** the company's market reach by **37%**
- **Coordinated** with the development team and **mastered Shopify** and **utilized** its functionality to create an online web store for the venture

Projects

Home Credit Default Risk Data Science Project, New York University, New York, USA Sep 2024 – Dec 2024

- **Designed and implemented** an end-to-end **machine learning pipeline** to **predict loan defaults** using XGBoost, **improving AUC from 0.67 to 0.78** and enhancing risk assessment for financial institutions
- **Conducted** extensive **data preprocessing**, including **handling missing values, outlier detection, and feature scaling**, then engineered 100+ features from applicant demographics, credit history, and behavioral data
- **Optimized feature selection** using **Random Forest importance ranking**, reducing dimensionality from 1,638 to 498 features while maintaining predictive performance and computational efficiency
- **Addressed severe class imbalance** (92% non-default, 8% default) through resampling techniques and cost-sensitive learning, ensuring model robustness, and validated performance through **cross-validation** and Kaggle submission

NYC 311 Service Data Science Project, New York University, New York, USA

Sep 2023 – Dec 2023

- **Integrated** 34M 311-Service Requests with NYC DOITT ZipCode data, enabling comprehensive analysis of **spatial, temporal, numeric, categorical, and text features** for valuable service request insights
- **Optimized Resource Allocation** by developing a **predictive model using regression analysis** with highest **accuracy of 87.11%** by **Random Forest Regressor** for 311-service requests, reducing response delays caused by departmental unavailability
- **Implemented classification techniques** to identify specific scenarios requiring **additional resources for prompt resolution**, contributing to a more efficient handling of service requests with **highest accuracy of 91.28%** by **XGBoost classifier**

Skills

Technical Skills: Web Development, Machine Learning, Application Development, Database Management, Data Analysis and Interpretation

Programming Languages: Python, HTML, CSS, JavaScript, PHP, C, C++, R, Swift, MySQL

Frameworks/Libraries: React JS, Django, NumPy, Pandas, Hadoop, NLTK(Natural Language Toolkit), TensorFlow, PyTorch, SciPy, Scikit-Learn

Other Software/Tools: Google Colab, Jupyter, Android Studio, Xcode