

PREETH NAIR

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| <https://preethnair.github.io/Portfolio> [PreethNair/](#) |

TECHNICAL SKILLS

Programming & Databases : Python | SQL (SSMS, MySQL) | Numpy | Pandas | Scikit-learn | Tensor-flow | PyTorch

Data Visualization : Matplotlib | Seaborn | Power BI

Data Analysis : Exploratory Data Analysis (EDA) | Statistical Analysis | Data Cleaning & Preprocessing

Cloud & Version Control : Microsoft Azure | GitHub

Soft Skills : Fast Learner | Optimistic Attitude | Good Communication Skills | Teamwork

WORK EXPERIENCE

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY (GGSIPU - East Campus)

New Delhi, India

Project Intern

Jan 2026 – Present

- Optimizing the YOLOv11 architecture in PyTorch to improve detection for low visibility underwater environments.
- Developing a multi-class object detection pipeline for **underwater flora, fauna, and trash** using customized dataset.
- Performing architectural experimentation, hyperparameter tuning, and evaluation to enhance model performance.

DEFENCE RESEARCH AND DEVELOPMENT ORGANIZATION (CFEES)

New Delhi, India

Research Intern

Nov 2022 – Jan 2023

- Designed and implemented a Genetic Algorithm-based optimization framework to solve VRP, minimizing total route distance under vehicle.
- Engineered geodesic distance matrix generation and performed parameter tuning on population size, mutation rate, generations, to improve convergence stability and solution quality.

UNIVERSITY PROJECTS

VENDOR PERFORMANCE ANALYTICS PIPELINE

Aug 2025

- Built an ETL & analytics pipeline on **100K+ records & ~7K brands**, uncovering **199 high-margin low-sales brands**, **\$2.71M unsold inventory**, and delivering a dashboard with **\$441M sales, \$134M profit & ~70% cost reduction insights**.

NIFTY-50 QUANTITATIVE PORTFOLIO ANALYSIS

Nov 2025

- Processed 500+ CSVs (~1M+ rows) using Python, engineering 15+ financial features with NIFTY50 integration. Built a 5-factor ranking model, backtested over 250+ days, and applied Random Forest (~X% accuracy).

NETFLIX RECOMMENDATION ENGINE

Jan 2024

- Developed a **Netflix-style recommendation system** using SVD on **24M+ ratings from 470K users**, applying data filtering, memory optimization (~65% reduction), and hyperparameter tuning to generate personalized movie recommendations.

EDUCATION

DRONACHARYA COLLEGE OF ENGINEERING

Gurugram, Haryana

Bachelor of Technology

Oct 2020 - Oct 2024

In Computer Science (AI/ML);

Percentage : 70%;

Relevant Coursework : DBMS, Operating Systems, Probability & Statistics, Machine Learning, Artificial Intelligence.

DRONACHARYA COLLEGE OF ENGINEERING

Gurugram, Haryana

Master of Technology

Expected Jun - Jul 2026

CERTIFICATES

Indian Institute of Technology (IIT) – iHUB DivyaSampark

Roorkee

Certification in Data Science & AI

Dec 2025

- Covered Machine Learning, Artificial Intelligence, Deep Learning, Statistics, SQL, Python