

# AMLAN ANSHUMAN NAYAK

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🌐 [amlan-anshuman-nayak](https://github.com/amlan-anshuman-nayak)

🐙 [Github](https://github.com/amlan-anshuman-nayak)

🔗 [Leetcode](https://leetcode.com/amlan-anshuman-nayak/)

## Education

### Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar

2023 – 2027

Bachelor of Technology in Computer Science and Engineering (CGPA - 9.78)

Bhubaneswar, India

### Guidance English Medium School

2023

AISCCE - CBSE, Science (PCM) (Percentage - 79.2%)

Bhubaneswar, India

### Ruchika High School

2021

CISCE - ICSE (Percentage - 92.5%)

Bhubaneswar, India

## Relevant Coursework

- Data Structures & Algorithms (DSA)
- Machine Learning
- Object Oriented Programming
- Natural Language Processing (NLP)
- Data Science

## Projects

### Finance Management System 🗄 | Java, OOP, Data Structures, File and Exception Handling

- Developed a Java-based finance management system to track income, expenses, and budgeting using OOP principles (Encapsulation, Inheritance, Polymorphism) for scalability.
- Implemented efficient transaction management using ArrayList & HashMap for storage, Stack & Queue for undo/redo, and file handling for persistence.
- Integrated exception handling to ensure data integrity and built an interactive console-based interface for seamless financial tracking.
- <https://github.com/CODER-AMLAN/Finance-Management-System>

### GDP Analysis System 🗄 | Python3, Pandas, NumPy, Matplotlib, Plotly

- Designed a data-driven system to analyze GDP trends (1960–2018) across 56 countries, handling missing values and ensuring data consistency.
- Computed GDP growth rates and performed Exploratory Data Analysis (EDA) to identify economic patterns and correlations.
- Developed interactive visualizations using Plotly, enabling bulk graph generation and comparative analysis between major economies.
- <https://github.com/CODER-AMLAN/GDP-Analysis-System>

### Human Activity Recognition Model 🗄 | Python3, ML, Sklearn, Pandas, NumPy, Matplotlib

- Developed a machine learning model to classify human activities (e.g., Walking, Sitting, Standing) using smartphone sensor data (accelerometer and gyroscope). Implemented data preprocessing, feature engineering, and model tuning to enhance accuracy.
- Preprocessed time-series sensor data (3-axial acceleration & angular velocity) using filtering, windowing, and feature extraction techniques.
- Built and optimized multiple ML models (Logistic Regression, Decision Tree, SVM, Random Forest) with Hyperparameter Tuning & Cross-validation for high classification accuracy.
- Performed EDA to detect patterns, remove anomalies, and extract time & frequency domain features for improved model generalization.
- <https://github.com/CODER-AMLAN/Human-Activity-Recognition-Model>

## Technical Skills

**Languages:** Python3, Java, SQL

**Developer Tools:** VS Code, Anaconda, IntelliJ Idea, Git, Github, Jupyter Notebook

**Technologies/Frameworks:** NumPy, Pandas, Matplotlib, Sklearn, Plotly

## Extracurricular Activities

- **Member, CODEX Club, SOA** (Jan 2025 – Present) – Contributing regularly to the club's **CODEX GitHub repository** by solving and submitting LeetCode problems using Java.
- **LeetCode Problem Solver** – Regularly practice DSA with a strong problem-solving mindset.
- **Hackathons & Team Leadership** – Led a team in multiple national-level hackathons, including HackerWars, SIH Internal Hackathon (Top 30), and CraftNCode Finalist, fostering collaboration and strategic problem-solving.