

# SUBHRANSU PRIYARANJAN NAYAK

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## Education

**Indian Institute Of Technology Bhubaneswar(IIT BHUBANESWAR)** (Expected graduation date: May. 2026)  
B.tech and Masters in Mechanical System Design || CGPA: 8.3

**Ascent Junior College, Visakhapatnam** (2018-2020)  
Grade 12 (Andhra Pradesh Board of Secondary Education) || CGPA: 9.82

**Jeevan Jyothi Convent (ICSE) School, Koraput** (2018)  
Grade 10 (Indian Certificate of Secondary Education) || Percentage: 93.2

## Projects

### ConnectHub

#### Real-time Chat Application

*React, Socket.io, Tailwind-UI, Firebase*

- Developed a responsive real-time chat application using React for the user interface, Firebase for authentication and messaging, and WebSocket (socket.io) for persistent two-way client-server communication.

### MovieMentor

#### Movie Recommendation Web and CLI Application

*ML, Scikit-learn, NLTK, Streamlit, argparse*

- Built a Movie Recommendation System using machine learning and NLP with content-based filtering, integrating Web and CLI interfaces via Streamlit and argparse.

### CranioRegen (Medical Research Project Supervised Under Professor Dr. Satish Panda)

#### Automated Pipeline for Cranial Defect Reconstruction Using Deep Learning

*OpenCV, U-Net, GANs*

- Developed an AI pipeline utilizing U-Net for segmentation and GANs for implant design, achieving a 30% increase in surgical accuracy and a 60% reduction in design time from CT scan to 3D Skull design.

### MultiThreadedYT-Sync

#### Command-Line YouTube Playlist Downloader

*Python, pytube, requests, concurrent.futures*

- Developed a multithreaded CLI tool for downloading YouTube playlists, reducing download time by 60% with robust error handling and retry support. It provides an advanced method for managing extensive video Resources.

## Programming Skills

**Core Fields:** Data Structures, Algorithms, Operating System, DBMS ,Linux

**Languages:** Java, Python, C, C++, JavaScript (ES6+), TypeScript

**Web Technologies:** Tailwind, Material UI, React Router, Redux, RESTful APIs,JWT, PostgreSQL, MySQL, SQLite

**Tech Stacks :** MERN stack, React Native stack, Flask, Socket.IO, DevOps (Learning)

**ML/AI:** Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, OpenCV

## Work Experience

### Subject Matter Expert (CS) – GradeUpAssignment

Feb 2024 - May 2024

- Guided individuals in analytical problem-solving within computer science, enhancing their understanding.

### Member – Neuromancer's (Programming Society, IIT Bhubaneswar)

Feb 2023 - Till Date

- Contributed to coding projects, organized workshops, hackathons, and mentored students in programming.

## Achievements

### Bronze Medalist in Inter IIT Tech Meet 10.0

April 2022

- Won bronze for our team in a hackathon, competing against teams from 23 IITs.

### Official Mobile Application for General championship 2024, IIT Bhubaneswar

March 2024

- Developed Official Mobile App for IIT Bhubaneswar Championship (2024).

### Hackathons Participated:

Feb 2024 - March 2024

- Game Development Hackathon: Developed a 3D game with Unreal Engine 5, earning 3rd place.
- Web Development Hackathon: Built a Full-stack ERP system with real-time Analytics Dashboard, achieving 3rd place.