Gourab Modak

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Leetcode | Codechef | Codeforces

EDUCATION

Indian Institute of Technology Madras (IITM) — May 2023 – Sept 2024
BS in Data Science and Applications — **CGPA: 9.63/10.0**

Jalpaiguri Government Engineering College (JGEC) — Sept 2022 – May 2026
B.Tech in Computer Science and Engineering — **CGPA: 9.33/10.0**

Competitive Exams: (94.2%ile in JEE Mains) and (98%ile in WBJEE Rank: 2152)

EXPERIENCE

iHub and HCi Foundation, IIT Mandi — June 2024 – July 2024
Software Engineering Intern — *Mandi, India*

- Engineered an automated EEG signal processing pipeline for 64-channel ANT Neuro devices using Python, reducing manual noise-cleaning time by **40%** for a dataset of 150+ patients.
- Developed and benchmarked 7 ML classifiers (SVM, RF, KNN); achieved **80%+ accuracy** in detecting Parkinson's disease severity.
- Optimized model performance by **20%** via Grid Search hyperparameter tuning and deployed a QR-based lab attendance system to streamline daily workflows.

Google Developer Student Clubs (GDSC) — Aug 2024 – Dec 2025
AI/ML Core Team Member — *Jalpaiguri, India*

- Mentored 100+ students in Data Structures and Algorithms (DSA) through weekly bootcamps and coding workshops.
- Spearheaded AI/ML introductory sessions, increasing club participation in technical events by 30%.

PROJECTS

Competitive Programming Editor — Live Link | GitHub
Tech Stack: React.js, Node.js, Monaco Editor (VS Code Engine), Chakra UI

- Architected a browser-based IDE tailored for competitive programmers, featuring multi-language support (C++, Python, Java) and custom snippet management.
- Integrated the **Monaco Editor** API to provide IntelliSense, syntax highlighting, and code auto-completion.
- Deployed on Vercel with optimized build settings for low-latency performance in low-bandwidth environments.

Optimized Clinical Prediction System (DiabOptiSVM) — GitHub
Tech Stack: Python, Scikit-Learn, Scikit-Optimize, Pandas

- Developed a robust SVM-based diagnostic model achieving **78% validation accuracy** (Industry Standard).
- Implemented **Bayesian Optimization** and Grid Search to fine-tune hyperparameters, outperforming standard baseline models by significant margins.
- Conducted extensive EDA using Seaborn/Matplotlib to isolate high-impact medical features for training.

TECHNICAL SKILLS

Languages: C++, Python, Java, JavaScript, SQL

Frameworks/Web: React.js, Node.js, Express, HTML5, CSS3

Machine Learning: Scikit-Learn, TensorFlow, Pandas, NumPy, Matplotlib, Seaborn

Developer Tools: Git, GitHub, VS Code, Vercel, Postman

ACHIEVEMENTS

- **Global Rank 211:** TCS CodeVita Season 13 (Round 1); **Rank 541** in Season 12 (World Rankings).
- **NPTEL Silver Medalist (Top 5% Nationwide):** Awarded by IITs for excellence in *Data Structures in Python, Joy of Computing, Discrete Mathematics*, and *English for Competitive Exams*.
- **Competitive Programming:** Rated **3-Star (Top 10%)** on CodeChef; Solved **1,500+** DSA problems across LeetCode, Codeforces, and CodeChef.
- **IIT Kharagpur Techfest (Kshitij):** 2nd Prize Winner in Voyager Robotics Competition.
- **Exam Qualifications:** 98%ile in WBJEE (Rank 2152), 94.2%ile in JEE Mains.