TANMAY CHATURVEDI

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EDUCATION

Indian Institute of Information Technology, Guwahati   Expected May, 2027
B.Tech, Computer Science and Engineering   CPI : 8.00/10

St. Mary's Christian School, Ghaziabad   2022
Senior Secondary, Natural Sciences   Percentage : 94.6%

PROJECTS

GeniusiFY (*ongoing*) *React, Node.js, Express, MongoDB, Spotify API, Chart.js* ⚙
A web app providing Spotify listening insights and personalized artist recommendations.
- Built a **React** UI with a **Node.js + Express** backend and **MongoDB** storage.
- Integrated the **Spotify API** for real-time music data and analytics.
- Designed interactive **Chart.js** visualizations for user trends.
- Future scope: Expand to mobile with **React Native**.

AlgoRank *React, Vite, TailwindCSS, Node.js, Express, Firebase, PostgreSQL, Judge0 API* ⚙
A competitive coding platform with authentication, real-time code execution, and user analytics.
- Built **secure authentication** with Firebase and role-based access.
- Developed an **interactive code editor** with syntax highlighting.
- Integrated **Judge0 API** for sandboxed code execution.
- Implemented **user analytics** to track submissions and performance.
- Planned features: Contests, leaderboards, profiles, ELO rating system, cloud deployment.

Lunar Lander RL Agent *Python, Stable-Baselines3, PPO, Gym* ⚙
Trained a reinforcement learning agent to autonomously land a spacecraft in **LunarLander-v3**.
- Implemented a **PPO-based policy** with Stable-Baselines3, training over **1 million time steps**.
- Optimized **hyperparameters** using grid search, improving performance by **40%**.
- Saved the **best-trained model** for deployment, reducing computation time by **30%**.

TECHNICAL SKILLS

Programming Languages	C, C++, Java, Python, JavaScript, SQL.
Databases	MySQL, PostgreSQL (basic), MongoDB (basic).
Frameworks and Platforms	ReactJS, NodeJS, ExpressJS.
Relevant Coursework	Data Structures and Algorithms, Computer Organization, Object-Oriented Programming (OOP), Operating System, Artificial Intelligence, Database Management Systems

ACHIEVEMENTS

- **Advanced** to the second level of Flipkart Grid 6.0 Software Development Track, outperforming over **99.7%** of participants, based on code efficiency and algorithm design in initial challenge.
- **Qualified** for round 3 of Tata Imagination Challenge, 2024 - Student Track, ranking in the **top 7,000** participants out of **3,00,000+** registered.
- **Qualified** for round 2 of Great AppSec Hackathon 2024, ranking in the **top 700** participants out of **6,000+** registered.
- **Pupil** on Codeforces with a max rating of **1359** and **3-star coder** on Codechef with a max rating of **1629**.
- Ranked **311th** nationally and **2nd** in IIIT Guwahati in the ICPC 2024 India Preliminary Practice Round.
- Ranked **1124th** globally in Codeforces Round-948, Div-2 programming contest.
- Ranked **214th** globally in Codechef Starters-141, Div-3 programming contest.