SANCHIT BISHNOI

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⌨ https://github.com/Sanchit029

Education

Indian Institute of Information Technology Senapati, Manipur **Sep. 2022 – May 2026**
Bachelor of Technology in Computer Science *Imphal, Manipur*

Relevant Coursework

- Data Structures
- Algorithms Analysis
- Database Management
- NLP
- Machine Learning
- Web Technology
- Optimization Techniques

Experience

Finalist-Smart India Hackathon **[December - 2024]**
NavPath-Finding the fastest way to reach between two points in the ocean *Hyderabad*

- Developed an intelligent maritime navigation system integrating real-time weather data, machine learning predictions, and historical patterns to optimize ship routes.
- Engineered custom heuristics combining real-time and historical data, allowing users to adjust the balance between prediction and real-time adaptation.
- GitHub: `github.com/Sanchit029/ShipNavigation_ML`

Runner-Up – Ahouba 2.0 IIIT Manipur Hackathon **[April 2025]**
Renewable Energy with AI *Imphal*

- Created a suite of AI-driven tools to optimize renewable energy potential and storage in Tamil Nadu, India.
- Developed reinforcement learning models for energy storage optimization, enhancing the efficiency of renewable energy utilization.
- GitHub: `github.com/Sanchit029/ML_Energy_Prediction`

Projects

BPE-Based Image Classification | *Python, NumPy, Matplotlib* **[April 2025]**
- Adapted Byte Pair Encoding (BPE), traditionally used in NLP, for image data to achieve efficient compression and classification.
- Implemented a custom BPE algorithm to transform image pixel data into token sequences, reducing memory usage and accelerating training.
- Conducted comprehensive experiments demonstrating that BPE-encoded images maintain classification accuracy while optimizing resource utilization.
- Developed visualizations and analytical tools to compare performance metrics between BPE-encoded and raw image data.
- GitHub: `github.com/Sanchit029/BPE_Encoding_Image_Classification_Analysis`

React Quiz Application - Interactive Web Development Project | *React, JavaScript, HTML/CSS* **[May 2025]**
- Developed a responsive quiz application using React and Vite, implementing modern state management and component-based architecture
- Engineered real-time user feedback system and progress tracking features, enhancing user engagement and experience
- Built a comprehensive scoring system with detailed performance analytics, demonstrating full-stack development capabilities
- GitHub: `github.com/Sanchit029//React_{Quiz}`

Technical Skills

Languages: Python, React.js, C, HTML/CSS, JavaScript,C++
Developer Tools: VS Code,Jupyter Notebook
Technologies/Frameworks: Linux, GitHub,MacOS