

# Samarth Saxena

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## TECHNICAL SKILLS

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ReactJS, Node.js, MongoDB, REST APIs, HTML, CSS, IoT, Machine Learning, BERT, Arduino, Git, VScode, GitHub, C, C++

## PROJECTS

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**AgriSage | React.js, Node.js, MongoDB, Flask, Plotly, YOLOv5, LightGBM** Aug 2024 – May 2025

- Built a full-stack web platform using React, Node.js, and MongoDB for crop insights and disease tracking.
- Designed dashboards with Plotly to visualize soil quality, weather trends, and recommendation outputs.
- Trained LightGBM on 2200+ soil and climate records to suggest locally suited crops.
- Deployed YOLOv5 via Flask microservice for plant disease detection using leaf images.
- Stored user-specific records in MongoDB; planned WhatsApp alerts and multilingual UI support.

**AnemiaView | React.js, Node.js, MongoDB, Flask, Arduino, sensors** Jan 2024 – June 2024

- Built a full-stack system to estimate hemoglobin using SpO data, enabling early detection of potential anemia.
- Designed a responsive frontend in React to display real-time vitals, patient trends, and alerts.
- Created REST APIs with Node.js and integrated Flask-based signal processing for PPG data analysis.
- Stored time-series records in MongoDB and interfaced MAX30100 sensor via Arduino with I2C handling.

**Textual Fingerprinting | React.js, Node.js, Express.js, Flask, BERT** Jun 2023 – Sep 2023

- Created a web tool using React, Node.js, and Flask to classify whether text is AI- or human-written.
- Built a clean UI with React and Tailwind CSS for live classification and model confidence feedback.
- Used Express as middleware to route text inputs securely to the Flask-based BERT model API.
- Stored text logs and predictions in MongoDB for monitoring and dataset refinement.
- Applied tokenization and embeddings via HuggingFace to generate model predictions.
- Built for academic integrity use-cases, AI detection, and early-stage misinformation filtering.

## CO-CURRICULAR ACTIVITIES

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**PR & Outreach Lead – GFG Club** 2023 – Present

- Led outreach and branding across campus with collaboration from 10+ GFG chapters nationwide.
- Handled public relations — wrote official communications, press releases, and proposals.
- Planned and executed social media campaigns (reels, tech posts), increasing engagement by 60%.
- Coordinated with guest speakers and sponsors for key technical events.

**Social Media Team Member – GFG Club** 2022 – 2023

- Created and published promotional graphics for workshops and contests, reaching 500+ students.
- Ensured consistent branding through regular highlights, posts, and design updates.

**Event Coordinator – Seminar by Prof. Chung** 2022

- Managed logistics for a neural networks seminar: registration, AV setup, and flow control.
- Led a team of volunteers to ensure seamless execution of the academic event.

## ACHIEVEMENTS

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- Selected as one of the top 4 finalists in a Capture The Flag cybersecurity competition conducted by the Linux Club..
- Secured 3rd place in a university-level hackathon during the Annual Fest
- Achieved runner-up position in the intra-college chess tournament and qualified as a semi-finalist in an inter-college chess tournament,
- Contributed as a key player in the university cricket team that won the championship during the Annual Fest.

## EDUCATION

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**VIT Bhopal University, Bhopal** 2022 – 2026  
*B.Tech. in Computer Science and Engineering* CGPA: 9.08 / 10

**Yashwant Public School, Mhow** 2021  
*CBSE Board – Class XII* Percentage: 92.8%

**Rajeshwar Higher Secondary School, Mhow** 2019  
*CBSE Board – Class X* Percentage: 93.8%