

SOHAM BISWAS

+91-6297026559 | sohambiswas711@gmail.com | <https://soham-biswas-portfolio.onrender.com/>



 [soham-biswas-748300293](https://www.linkedin.com/in/soham-biswas-748300293) |  [soham-711](https://github.com/soham-711) |  [Soham Biswas](https://twitter.com/soham_biswas)

Newtown, West Bengal - 700156, India

OBJECTIVE

Seeking a challenging position in software development and AI to leverage my expertise in full-stack engineering (MERN), algorithm design, and mobile app development. Aiming to contribute to innovative, scalable solutions at the intersection of artificial intelligence and user-centric application design.



EXPERIENCE

- **Hackathon Participant – Smart India Hackathon 2024**  Aug 2024
Full-Stack Developer Remote
 - Developed a scalable and secure web application named **Farm Market** using React and MongoDB to enable real-time reporting of crop prices by and for farmers.
 - Designed intuitive UI/UX to allow farmers to view and contribute price data, ensuring accessibility and usability.
 - Enabled efficient backend data storage and retrieval using REST APIs, improving real-time accuracy and farmer collaboration.
 - Selected among the top 30 teams at the college level from over 200 participating teams for innovation and impact.
- **Final Submission – GDG Solution Challenge 2025**  Feb 2025 – May 2025
MERN-Stack Developer Remote
 - Submitted **VANISH**, an AI-powered fire safety training platform for hotel staff, as a finalist entry for the GDG Solution Challenge 2025.
 - Designed gamified simulations and interactive video modules to train personnel in emergency scenarios with real-time feedback.
 - Integrated **FIREBOT**, a conversational AI assistant, and sensor-based response evaluation to assess situational handling under pressure.
 - Focused on enhancing emergency preparedness in the hospitality sector, under the slogan: “No More Flame, No More Fail, Only Safety, With Faith.”

EDUCATION

- **Sister Nivedita University** jun 2023 - july 2027
B.Tech in Computer Science Newtown, North 24 Parganas
 - GPA: 9.3/10
- **Simlon AK Vidyamondir** 2021 - 2023
Higher secondary Education Simlon, Purba Bardhaman
 - Grade: 85.5%
- **Bulbulitala Sishu Niketan (HS)** 2019 - 2021
Secondary Education Bulbulitala, Purba Bardhaman
 - Grade: 95.5%

PROJECTS

- **AI Plant Analyzer: Intelligent Botanical Identification** Jan 2024 – Feb 2024
Tools: MERN Stack, Google Gemini API 
 - Developed a web-based tool that leverages AI to identify plant species from uploaded images using custom-trained models.
 - Implemented a Scan → Analyze → Download pipeline to provide plant name, scientific classification, medicinal uses, and geographic distribution.
 - Integrated MongoDB for user logs and data retrieval, enabling nature enthusiasts and researchers to track identified flora.
 - Designed the interface to be intuitive for both academic and casual users interested in environmental exploration.
- **YouTubeNote: Smart Note-Taking from Videos** Dec 2023
Tools: HTML, CSS, JavaScript 
 - Built a tool that helps to write notes with timestamps from YouTube videos to enhance learning efficiency.
 - Enabled users to export notes in TXT formats and access saved sessions via a storage system.
 - Designed an intuitive UI to support keyword filtering, time-linked navigation, and seamless viewing alongside the embedded video.

- **VANISH: AI & IoT-Based Emergency Fire Response System**

Feb 2025 – May 2025

Tools: MERN Stack, Gemini API, Node.js



- Developed an AI-driven fire detection and emergency response platform with 95% smoke/flame detection accuracy using real-time image and sensor input.
- Integrated **FIREBOT**, a 24/7 AI assistant providing guidance, alerts, and training via Twilio-based voice/text communication.
- Connected the system to 12+ nearby fire stations for live response coordination and analytics under 2 minutes.
- Included 50+ training videos, 15+ interactive simulation modules, and a live dashboard with 98% real-time data accuracy.
- Finalist project for the **GDG Solution Challenge 2025**, addressing safety in the hospitality sector under the slogan: "No More Flame, No More Fail, Only Safety, With Faith."

- **Online Book Store: E-Commerce Web App**

Aug 2024 – Sep 2024

Tools: MERN Stack, JWT Auth



- Built a full-featured bookstore web app with product search, user auth, cart.

- **AlgoTracker: Algorithm Visualizer for Android**

Mar 2024 – Present

Tools: Android, React Native, Expo



- Developed a mobile app that visualizes algorithm execution (FIFO, LRU, OPTIMAL) step-by-step.
- Used React Native for cross-platform compatibility with animations and interactive step-throughs.

SKILLS

- **Frontend Development:** HTML5 & CSS3, JavaScript (ES6+), TypeScript, React.js, React Native / Expo, Tailwind CSS, Bootstrap, Next.js (Basic)
- **Backend & Database:** Node.js, Express.js, Clerk Auth, Convex, MongoDB, SQL
- **Programming Languages:** JavaScript, TypeScript, Python, C, C++
- **Tools & Platforms:** Postman, Git / GitHub, Gemini API, VS Code
- **Algorithms & Problem Solving:** Data Structures, Competitive Programming, Time Complexity Optimization
- **Cloud & DevOps:** Vercel, Netlify, Render
- **Languages Known:** Bengali (Native), English (Professional Proficiency), Hindi (Professional Proficiency), German (Basic)

CERTIFICATIONS

- **HTML Basics – KG Coding** Feb 2024
- **JavaScript Mastery – KG Coding** Oct 2024
- **Full Stack Development (MERN) – Udemy** Jun 2024
- **Introduction to AI – Coursera (IBM)** Feb 2025
- **Introduction to Generative AI – Coursera (Google)** Feb 2025

PORTFOLIO

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