Snigdha Deb

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Education

VIT Bhopal University   Bhopal, Madhya Pradesh
BTech   September 2022 - 2026
Computer Science and Engineering with Specialization in Gaming Technology
Cumulative GPA: 8.3/10

12th Standard
New Horizon Public School   Navi Mumbai, Maharashtra
CBSE Cumulative GPA: 8/10   Jul 2022

10th Standard
New Horizon Public School   Navi Mumbai, Maharashtra
CBSE Cumulative GPA: 9.07/10   Jul 2020

Projects

Phy.Gen – Prompt-Based Physics Simulator   April 2024 – May 2024

- Engineered a web-based simulation tool that converts **natural language prompts into real-time 2D/3D physics simulations**, enabling dynamic learning
- Programmed core physics logic—including **gravity, motion, force, and elastic collisions**—using **JavaScript** and **Three.js**, achieving 60 FPS for smooth interactivity.
- Developed **3+ interactive modules** (pendulum, spring-mass, car crash) with adjustable parameters, increasing student engagement by **40%** in user testing.
- Designed the tool to enhance conceptual clarity in physics, reaching **200+ users** within the first month via educational outreach.

ShopHub – MERN Stack E-commerce Platform   January 2025 – April 2025
Tech Stack: MongoDB, Express.js, React.js, Node.js, Tailwind CSS, shadcn/ui

- Architected a **scalable full-stack e-commerce app** with responsive product listings, secure **JWT-based user authentication**, and real-time cart updates.
- Built backend RESTful APIs with **Node.js and Express**, supporting **CRUD operations for 500+ products** and handling concurrent requests with <200ms latency.
- Integrated **MongoDB Atlas** for persistent data storage and designed a modern UI using **Tailwind CSS** and **shadcn/ui**, improving UX scores by **30%**.
- Deployed an admin dashboard for efficient **user and inventory management**, tested across devices for consistent performance and **100% mobile responsiveness**.

Certifications

IBM Career Education Program – Certified Entry-Level Computer Science Associate   January 2025 – April 2025
Issued by IBM | Certificate ID: IBMCE CECSA1IN

MERN Full Stack Developer Certification   January 2025 – April 2025
Issued by Ethnus | Certificate ID: 84Z4KWFM

Intro to AR/VR/MR/XR: Technologies, Applications & Issues   December 2023
Coursera

ADDITIONAL

Technical Skills: Python, Java, C++, C#, SQL; Proficient in MATLAB, Excel
Tools/Platforms: VS Code, Unity, Jupyter notebook, MATLAB, My SQL
Languages: Fluent in Hindi, English; Conversational Proficiency in Marathi and Bengali