Snigdha Deb

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Education

VIT Bhopal University |Bhopal, Madhya Pradesh   Sept 2022- July 2026
Bachelor of Technology (Computer Science Engineering with specialization in Gaming Technology) CGPA- 8.5/10

New Horizon Public School | Navi Mumbai, Maharashtra
Higher Secondary Grades CGPA: 8/10   July 2022
Matriculation Grades: 86%   June 2020

Projects

Phy.Gen – Prompt-Based Physics Simulator   April 2024 – May 2024
Tech Stack: Unity Engine, HTML, CSS, TypeScript, React, JSX, and Tailwind CSS.

- 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**.

Spam Comment Filter – Supervised Learning Project   February 2025 – May 2025
Tech Stack: Python, NLTK, NumPy, Scikit-learn

- Developed a supervised machine learning model to accurately classify spam and hate comments by executing comprehensive text preprocessing, feature extraction, and data cleansing.
- Managed end-to-end data retrieval, transformation, and regression model training to ensure robust performance.
- Optimized model accuracy from 80% to nearly 90% through systematic hyperparameter tuning and iterative evaluation.

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
Coursera | *Certificate ID:* 5CTL57KDN6BC   December 2023

ADDITIONAL

Technical Skills: Python, Java, C++, MySQL, HTML, CSS, JavaScript
Tools/Platforms: VS Code, Unity, AWS, Git, GitHub
Languages: Fluent in Hindi, English; Conversational Proficiency in Marathi and Bengali