Subhodeep Dey

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Bachelor of Technology
Computer Science and Engineering
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EDUCATION

Degree	Institute	CGPA/Percentage	Year
B.Tech. (CSE)	Vellore Institute of Technology, Vellore	8.82	2021-25
Higher Secondary/12th (PCM)	St. Joseph's Co-ed School (CBSE)	90.5%	2019-20
Secondary/10th	St. Joseph's Co-ed School (CBSE)	95.6%	2017-18

EXPERIENCE

- **Centre for Development of Advanced Computing (CDAC)** — Sept 2023 - Nov. 2023
  Software Developer Intern — Kolkata, West Bengal
  - **Developed a full-stack web portal** from scratch using Django Python, and MySQL. Used PHPMyAdmin for database management.
  - **Designed and implemented API routes and Model-View-Controller (MVC) architecture** in Django for optimized data flow, improving system performance and maintainability.
  - **Utilized Postman** for API testing and validating endpoints. **Normalized the database**, and optimized data structure for efficiency and reducing redundancy.
  - **Created and incorporated an interactive dashboard** for data visualization, enabling users to generate reports and print PDFs. **Improved data presentation** by designing visual graphs, enhancing clarity and user engagement through intuitive data representation.

PROJECTS

Personal Website: www.subhodeepdey.com (for additional information and projects)

- **Full-Stack Blog Application** — *July 24*
  Developed a full-featured blog application using the MERN stack. — Live Url | Github
  - Implemented rate limiting to enhance API security and performance, protecting the application from potential abuse.
  - Integrated image upload functionality to allow users to enhance their blog posts with visual content.
  - Designed an admin panel for managing blog content, user accounts, and overall site moderation.
  - Added a comment feature, allowing users to engage with posts and interact within the community.
  - **Tools & technologies used**: MongoDB, Express, React, Node.js, JWT, Multer

- **Roommate Finder Application** — *Aug. 2023*
  Created a Roommate Finder web application in MERN Stack with over 100+ users. — Live Url | Github
  - Implemented pagination for efficient data browsing.
  - Integrated JWT authentication for secure user login and session management.
  - Applied rate limiting to enhance API security and performance.
  - **Tools & technologies used**: ReactJS, Node, Express, Tailwind/CSS, MongoDB

- **Movie Recommendation System** — *June 23*
  Created a Movie Recommendation System in Streamlit. — Live Url | Github
  - Developed a Movie Recommendation System using Python, leveraging the TMDB dataset for content-based filtering.
  - Implemented vectorization techniques (Bag of Words) to convert movie descriptions into numerical representations.
  - Utilized Cosine Similarity from the sklearn library to measure similarity between movies, enabling accurate recommendations.
  - Optimized recommendation accuracy by fine-tuning vectorization parameters and similarity thresholds.
  - Handled large datasets efficiently by employing vectorization and similarity calculations for scalable performance.
  - **Tools & technologies used**: Python, sklearn, Pandas, NumPy, TMDB dataset

TECHNICAL SKILLS

- **Programming:** C/C++, Python, Java*, R*, JavaScript, TypeScript, SQL
- **Web Skills:** HTML/CSS/JS, Django, ReactJS, NextJS, MERN stack, Tailwind CSS, Flutter*, Streamlit, REST APIs, Firebase, Supabase
- **Tools & OS:** Git, Docker*, Postman, Jupyter Notebook, Google Colab, VS Code, PyCharm, CodeBlocks, NetBeans, Vercel, AWS*, Windows, Linux*
- **Libraries/Frameworks:** Pandas, Numpy, scikit-learn, Kaggle, Axios, JQuery
- **Databases:** MySQL, PostgreSQL, MongoDB   * *Elementary proficiency*

Key Courses Taken

- DSA, OOP, OS, DBMS, LLD/HLD, AI/ML, Comp. Networks, Comp. Architecture, Compiler Design, Web Dev.

Coding Profiles

- **Leetcode:** quirrel - Solved 350+ problems
- **CodeChef:** black_heretic - Highest Rating: 3 Stars (1491)
- **Codeforces:** Black_Heretic - Highest Rating: (968)

Positions of Responsibility

- **Coordinator,** Mozilla Firefox Club   *Jun. 2023 - Present*
  - Built a major part of the frontend of the website of Mozilla Firefox Club in React.
  - Managed a team of 10 juniors and coordinated with them for the creation of the frontend of the website.

- **Core Committee Member,** roboVITics Club   *Jun. 2023 - Aug. 2024*
  - Conducted review meetings and helped juniors solve doubts related to AI/ML domains.

- **Student Ambassador,** Streamlit   *Jun. 2023 - Oct. 2023*
  - Developed various projects using Streamlit and promoted its use within my campus by conducting online sessions for students.

Achievements

- **Certificate - Codechef SnackDown 21,**
- **Successfully completed "Virtual Labs: Hands-on Workshop",** Indian Institute of Technology Bombay.
- **Shortlisted for Semi-Final round in Code Gladiator,** Organized by Techgig.
- **Shortlisted for Final round (Top 75 teams from 300) in Catapillar Hackathon,**
  Developed backend and API integration for AI-powered MERN web app "InspectAI" in a 3-person team.

Certifications

- AWS Academy Cloud Architecting certificate
- AWS Academy Cloud Foundations certificate
- Lyft - Back-End Engineering Certificate by Forage

Languages

- English, Hindi, Bengali (native), Korean, Japanese*   ** Elementary proficiency*