Souraj Saha

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Education

Bachelor of Technology, Computer Science and Engineering **2022 – 2026**
VIT Bhopal University, Bhopal, India **CGPA: 8.1/10.0**
Kendriya Vidyalaya **Class XII, 2022**
Central Board of Secondary Education (CBSE) **Percentage: 83%**
Don Bosco School **Class X, 2020**
Central Board of Secondary Education (CBSE) **Percentage: 92%**

Technical Skills

- **Languages:** JavaScript (ES6+), TypeScript, Python, C++, SQL
- **Full-Stack Development:** React.js, Redux, Node.js, Express.js, REST APIs, HTML5, CSS3, Tailwind CSS
- **Data Science & ML:** Pandas, NumPy, Scikit-learn, Matplotlib, Jupyter Notebook
- **Databases:** MongoDB, Mongoose, MySQL
- **Tools & DevOps:** Git, GitHub, Docker (Basics), CI/CD, Vercel, Render

Experience

Data Science and AI Intern **January 2025 – March 2025**
YBI Foundation (Remote)

- Leveraged Pandas and NumPy to clean and preprocess datasets totaling over 50,000 records, enhancing data quality and ensuring consistency across pipelines.
- Designed and implemented 3 machine learning models, such as Linear Regression and Decision Trees, achieving a 15% boost in accuracy compared to baseline predictions.
- Assessed model performance using metrics like accuracy, precision, and recall, fine-tuning algorithms that increased reliability by 20%.
- Crafted data visualizations with Matplotlib and Seaborn, transforming raw data into actionable insights for project stakeholders.

Projects

- **MindWell | Full-Stack Mental Health Platform (MERN)** **December 2024 – February 2025**
  - *Technologies: React.js, Node.js, Express.js, MongoDB, JWT, Redux* [GitHub Link]
  - Architected a secure and scalable full-stack web platform using React.js, Node.js, Express.js, MongoDB, and JWT, serving over 25 users with tailored mental health support.
  - Integrated user authentication and self-assessment tools, enhancing user engagement by 30% during pilot phases.
  - Engineered a RESTful API with Node.js and JWT, ensuring stateless authentication and safeguarding sensitive user data.
  - Developed a dynamic, responsive interface using React.js and Redux Toolkit, improving navigation efficiency and reducing load times by 25%.
- **AI-based Predictive Maintenance for Farm Equipment** **June 2025 – August 2025**
  - *Technologies: Python, Pandas, Scikit-learn, Matplotlib* [GitHub Link]
  - Built a predictive maintenance solution using Python, Pandas, and Scikit-learn, analyzing over 10,000 sensor readings to forecast equipment failures with high precision.
  - Enhanced model input through advanced feature engineering, attaining 92% prediction accuracy within a 7-day window.
  - Delivered real-time alerts that helped cut maintenance costs by 20%, improving equipment uptime and operational efficiency.
  - Illustrated findings using Matplotlib, simplifying complex data for technical and non-technical audiences alike.

Positions of Leadership

- **Project Lead (Academic Projects):** Coordinated 5+ software development initiatives, employing Agile methodologies for efficient task management and sprint execution, leading to 100% on-time delivery.
- **School Captain:** Spearheaded school-wide initiatives, supervised teams of 40+ students, and facilitated communication between students and faculty, boosting participation and collaboration.