Shardul Rana

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Education

Bachelor of Computer Science: VIT Bhopal University – **9.05/10**	**Sep 2022 – Present**
Class XII: Doon International School – **86.67%**	**Apr 2020 – July 2021**
Class X: Summer Valley School – **93.67%**	**Apr 2018 – May 2019**

Skills

- **Languages & Web:** Python, Java, JavaScript, SQL, HTML5, CSS3, React.js, Node.js
- **Backend & Databases:** MongoDB, MySQL, Mongoose, RESTful APIs
- **Data Science & ML:** Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow
- **Visualisation & Tools:** Git/GitHub, Postman, Jupyter, VS Code, Miro, Mural, PyCharm, IntelliJ
- **Libraries & Frameworks:** PyQt5, MobileNet V1, BeautifulSoup, Axios, React Router
- **Soft Skills:** Cross-functional coordination, Data-driven decision-making, Team mentoring, Task delegation, Technical documentation, Sprint planning, Team-based execution

Projects

TVDS – Real-time traffic violation monitoring system (*link*)   **Jan 2024 – May 2024**

- **Designed and trained a MobileNet V1-based CNN** using **OpenCV** and **NumPy**, achieving **~95% accuracy** in detecting signal, parking, and direction violations from **real-time CCTV feeds**.
- **Built a PyQt5-based GUI** for live monitoring and auto-flagging of infractions, reducing manual review time by **~50%** and enhancing enforcement efficiency.
- **Implemented SQL** to manage **5,000+ records**, improving query performance and rule-based violation detection speed by **~20%**.

SHOPEZ – MERN Stack E Commerce application (*link*)   **Jan 2025 – May 2025**

- **Developed a full-stack e-commerce platform** using **MongoDB, Express.js, React, and Node.js**, with user authentication, product CRUD, and cart functionality.
- **Integrated RESTful APIs** with optimised response times of **~280–300ms**, improving transaction flow and reducing page load time by **25%**.
- **Simulated payment gateway** and **visualised system workflows** and **feature planning** with **Miro** and **Mural** for team alignment and technical clarity.

Certifications & Experiences

DATA ANALYTICS – GOOGLE (*link*)   **Nov 2024 – Dec 2024**

- Utilised **spreadsheets, SQL, and data visualisation tools** (Google Sheets, Power BI) to analyse complex datasets and deliver **executive-level dashboards**, enabling data-driven decisions and improving simulated business outcomes by **25% with ~30% faster insight generation**.

PYTHON FOR DATA SCIENCE & AI – IBM (*link*)   **Nov 2024 – Dec 2024**

- **Applied Python, NumPy, Pandas, and REST APIs** to automate data workflows in **Jupyter Notebooks**, streamlining data processing tasks by **30%**

SHOPEZ: E Commerce application – SmartBridge (*link*)   **Jan 2025 – May 2025**

- Developed a **full-stack MERN e-commerce application** with secure authentication, cart, and product management features; improved API response time to **~280ms** and **mapped component interactions** and **backend flow** using **Miro** and **Mural** to **streamline cross-team communication**.

Leadership & Achievements

- **Recognised for analytical and communication excellence** – Ranked in the **top 1%** as a **2× National Math Olympiad Gold Medallist** and secured **1st place** in an Inter-School Spelling Bee among **50+ participants**.
- **Demonstrated leadership and event management** – Led **5+ creative projects** and managed events with **200+ attendees** in ELA; organised **3 hackathons** and improved participation and team efficiency by **15–20%**.
- **Applied data skills to real-world challenges** – Contributed to a **university project with Dehradun Police** on traffic analytics and qualified for **Smart India Hackathon 2024 (Internal Rounds)** with a civic-tech solution proposal.