**Vatsalya Shailesh Sharma**

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**EDUCATION**

**Bachelor of Technology,** *G. H. Raisoni College of Engineering* [](file:///C:\Users\VATSALYA\Downloads\Score%20card%20_6.pdf) 2021/01 - present

Coursework: Database Management system (DBMS), Distributed Database Management Nagpur, India

system (DDBMS), Machine Learning Algorithm, Data Preprocessing, Computer Vision and Deep

Learning Computer Networks, Natural language processing, Operating System, Big Data

**SKILLS**

* Programming: C++, Java, Python, SQL
* Technical: Data Structures, Algorithms, DBMS, Operating System, Object Oriented Programming, Machine Learning, Computer Vision.
* Operating System: Windows, Linux
* Java Frameworks: Spring, Spring Boot, and Hibernate
* Cloud Platforms: AWS
* Version Control: Git, GitHub

**PROFESSIONAL EXPERIENCE**

**AI Technical Intern**, *Deft & Tact solutions Pvt Ltd*  2024/11 – present

* Developing spatial algorithms for AR and AI-based image processing, improving accuracy by 20% using Python.
* Researching emerging technologies and trends, providing insights to support developing products.
* Contributing to design, prototyping, and testing, enhancing process efficiency by 15% and ensuring quality documentation.

**Computer Vision Research Intern**, *Advance Dental Hospital*  2023/09 – 2023/12

* Developed a cutting-edge AI model for dental imaging, revolutionizing diagnostic accuracy and improving diagnostic accuracy and efficiency by 40%.
* Conducted comprehensive image labeling and annotation activities utilizing Roboflow and labeling tools, creating precise datasets for training AI models, ensuring reliable results in dental image analysis.
* Utilized python libraries such as TensorFlow, PyTorch, OpenCV, and YOLO.

**PROJECTS**

**Blockchain-based Voting System** [](https://github.com/Vatsalya-24/Blockchain-based-voting-system)

* Created a decentralized blockchain voting system with Java and Spring Boot, guaranteeing 100% transparency with Web3j and unbreakable vote integrity.
* Improved backend architecture, allowing for real-time election processing and a 30% increase in system scalability.
* Tamper-proof vote tracing and a 50% reduction in fraud risks thanks to the implementation of blockchain smart contracts.

**Auction Management Software** [](https://github.com/Vatsalya-24/auction_management)

* Using Java, Spring Boot, and Hibernate, an RFQ system was built to streamline vendor quote submissions for auctioned products.
* Increased auction efficiency by timer feature optimization, resulting in a 15-20% reduction in length with stringent deadlines.
* Integrated JavaMail API and WebSocket to enable real-time bidding and automatic notifications, resulting in a 10-15% increase in successful bids.

**Achievements**

* Contest rating of 2500+ on leetcode
* 2+ Time Biomedical Hackathon winner
* 2+ Time SIH Hackethon prefinal Qualifier

**PUBLICATIONS**

**A Comparative Study of Feature Extraction Models for Image Caption Generation,** [](file:///C:\Users\VATSALYA\Downloads\vatsalya_research.pdf)

*International Journal for Research in Applied Science & Engineering Technology (IJRASET)*

* The study compares ResNet, DenseNet, VGG, InceptionNet, and XceptionNet for image captioning.
* VGG has the highest BLEU scores, indicating the best performance.
* ResNet and DenseNet are competitive, while Inception and Xception perform slightly lower.

**Research Intern**, *BETiC GHRCE*  2024/09 – 2024/10

* Led the creation of a portable, affordable, AI-powered CPR device with a 50–75% reduction in production costs while maintaining dependability.
* Proactively incorporating cutting-edge AI techniques to improve compression accuracy by about 20% in order to meet medical standards.
* Working together with a cross-functional team, we were able to improve portability without sacrificing performance by reducing the machine's size by 30%.

**Dental Imaging and Analysis using Computer Vision** [](https://coe-teeth-u7qikdnz4lufsqxydetao9.streamlit.app/)

* Achieved 95% accuracy in dental image analysis with advanced YOLO algorithms, reducing analysis time by 60%.
* Used YOLO algorithms to detect, number, and identify regions in dental imagery, cutting manual analysis time by 75% for faster treatment planning.
* Implemented Git/GitHub for CI/CD and utilized Streamlit for frontend connectivity, enhancing system performance and enabling rapid iteration for better user experience.