

# Jaivansh Chawla

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## EDUCATION

### Bachelor of Technology, Computer Science & Engineering (AI & ML)

Manipal University Jaipur • Jaipur, India • 2027 • 9.20

• Relevant Coursework: DSA, Design & Analysis of Algorithms, Object-Oriented Programming (Python), Relational Database Management Systems (RDBMS), Operating Systems, Artificial Intelligence, Machine Learning

## EXPERIENCE

### Student Placement Coordinator

Student Placement Cell, Manipal University Jaipur

January 2025 - Present, Jaipur

- Appointed **Liaison Officer for Dell Technologies' HR**, coordinating with **40+ HR professionals** and managing full-cycle event execution between academia and industry.
- Spearheaded summit operations as **Core Event Organizer**, overseeing logistics and technical execution for **400+ attendees**.
- Co-led event branding and design**, producing **20+ key visual assets** (flexes, IDs, backdrops, social media creatives) that ensured brand consistency and elevated event presence.

### Artificial Intelligence Intern

Codsoft

September 2024 – October 2024, Remote

- Built a modular Python voice chatbot using SpeechRecognition, supporting 20+ user intents and prepared for seamless future NLP integration.
- Implemented **3 AI models**: a Minimax + Alpha-Beta Pruning Tic-Tac-Toe agent, a CNN-Transformer image captioning model (BLEU ~0.56), and a recommendation engine using SVD and neural collaborative filtering.
- Engineered a **high-precision facial recognition** system by combining Haar cascades with deep learning (MTCNN, FaceNet), achieving >95% identification accuracy.

### Content Writer

Atal Incubation Center (MUJ)

August 2024 – May 2025, Jaipur

- Authored detailed articles and reports for flagship events** (Startup Mela 3.0, Cohort 2025), increasing event visibility and online engagement by **40%**.
- Edited and published 30+ articles, partnering with founders and VCs to document key insights on startup growth and funding.

## PROJECTS

### Tibraze – AI-powered Tibial Condyle Analysis (Ongoing Research Project)

February 2025 - Present

- Conducted feasibility analysis on 500+ sensor samples to enable real-time knee pressure monitoring and cartilage health prediction.
- Designed experimental ML pipelines with 1,000+ annotated data points for live classification and tri-level joint condition assessment.
- Prototyped RNN/CNN architectures forecasting cartilage deterioration and detecting early-stage arthritis with high accuracy.
- Tech Stack: Python (TensorFlow, PyTorch), MongoDB, RNN/CNN

### Arteria – Smart Blood Donor Finder

January 2025 - Present

- Architected a real-time blood donor matching platform processing 1,000+ donor records with hierarchical filtering and Dijkstra's algorithm, achieving sub-second response times in emergency simulations.
- Optimized database queries for 98%+ match accuracy, enabling rapid identification of eligible donors by blood type and geolocation.
- Tech Stack: Python (Pandas, NumPy), MySQL

### SatMap(Satviz)

December 2024 - Present

- Designed a 3D-enabled web app simulating Beacon-Iridium satellite handshakes, analyzing 1,000+ orbital events across configurable LEO orbits.
- Automated TLE generation and orbital propagation with satellite.js, processing 5,000+ time steps per simulation with blackout logging and handshake timing via LOS logic.
- Synthesized a React-based UI with real-time metrics, interactive 2D/3D maps, and playback controls for precise event filtering and spatial visualization.
- Tech Stack**: React, TypeScript, satellite.js, Three.js, @react-three/fiber, Axios

### ScriptSense: Handwritten Text Recognition & Key Concept Extraction

November 2024

- Developed a handwritten text recognition pipeline using transformer-based OCR (TrOCR) on the CVL dataset, achieving CER 0.04 and WER 0.09.
- Automated preprocessing, label generation, and fine-tuning for line- and page-level recognition across 310+ writers.
- Coalesced spaCy NER to extract 15+ entity types and implemented post-processing for spelling correction and structured JSON output.
- Tech Stack: Python, PyTorch, HuggingFace Transformers, spaCy, pandas, numpy.

### JASSPA Codes

September 2024

- Engineered a full-stack alumni portal managing 500+ alumni records, enabling real-time search and contact by batch, specialization, and placement history.
- Integrated event tracking and academic archiving modules, providing searchable access to 100+ technical resources, past papers, and 20+ upcoming events.
- Devised an admin dashboard with JWT authentication, supporting secure moderation and real-time handling of 50+ monthly user queries.
- Tech Stack: HTML, CSS, JavaScript, Node.js, Express.js, MongoDB, REST APIs, JWT Authentication

## SKILLS

**Programming & Tools**: Python, C, C++, HTML/CSS, JavaScript, Node.js, Express.js, MySQL, Git/GitHub, MS Suite (Excel, Word, PowerPoint, etc.)

**Foundational & Frameworks**: Oracle SQL, React, Three.js, Docker, Kubernetes, NLP, Linux (Ubuntu), AI/ML, OpenCV, NumPy, Pandas, TensorFlow, MATLAB, Arduino

**Creative & Design**: Blender, Canva, Figma, Photoshop, DaVinci Resolve, UI/UX Design, Content Writing

**Languages**: English (Fluent), Hindi (Native), Punjabi (Conversational), German (A1)

## CERTIFICATIONS

- Three-time Dean's List recipient (GPA 9+), awarded in Semesters I, III, and IV
- Design & Analysis of Algorithms – IIT Madras, Swayam, NPTEL
- Data Structures & Algorithms – CodeChef (C, C++, DSA, Algorithms)
- Linux System Administration Fundamentals – RedHat RHCSA & RHCE Training
- Object-Oriented Programming using Python – Cisco Networking Academy (Python, Pandas, NumPy, Tkinter, OOP)
- Database Management & Programming – Oracle (PL/SQL, MySQL, Relational Databases)