

MOHD AFTAAB

SAS Nagar, Mohali, Punjab

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Education

Chandigarh University

Bachelor of Engineering (BE) in Computer Science and Engineering — CGPA 8.56

July 2022 – July 2026

Mohali, Punjab

Professional Certifications

- OCI 2024 Generative AI Professional
- Microsoft Power BI Data Analyst
- Data Visualization with Python
- Python Data Structures
- Big Data and Processing

Experience

University of New South Wales (UNSW)

Machine Learning Intern

July 2024 – Present

Sydney, Australia (Remote)

- Developed a GIS framework leveraging **ArcGIS** and **QGIS**, improving spatial analysis and settlement pattern identification by 30%.
- Analyzed high-resolution satellite imagery from **Landsat**, **IKONOS**, and **WorldView** for comprehensive spatial analysis.
- Conducted multispectral image analysis, identifying 20+ archaeological sites and reducing manual analysis time by 50%.

Indian Institute of Information Technology Bhopal

Data Analytics and Machine Learning Intern

May 2024 – July 2024

Bhopal, MP (On-site)

- Developed an **XGBoost**-based predictive model for heart health scores using wearable technology data, achieving **99.37% accuracy (R² of 0.9937)**.
- Achieved a low **Mean Squared Error (MSE) of 5.2250e-05**, showcasing high precision in predictions.
- Enhanced model reliability by engineering strategic features and performing comprehensive data cleaning.

Vell.ai

Full Stack Engineer

April 2024 – May 2024

United States (Remote)

- Worked on **API integration**, connecting backend and frontend for seamless data flow.
- Integrated **Machine learning applications**, with backend to improve functionality.
- Managed and optimized data in **MongoDB** and worked with both relational and NoSQL databases.

Projects

AI-Driven Approval System for AICTE Applications | Transforming Institutional Approvals with AI

[LINK](#)

- Designed frontend in **ReactJS** using **Tailwind CSS**, integrated **REST APIs** and **MongoDB** database.
- Containerized endpoints using **Docker** for improved scalability and portability.
- Designed and implemented **SARTHI**, an AI-powered system for automating document verification and evaluator scheduling.
- Utilized **OCR**, **NER**, and **AI-based validation** models to ensure accurate and efficient application processing.
- Engineered a secure backend with **Node.js**, **Python**, and **FastAPI**, integrated with **Facial Recognition** and **JWT**-based authentication.
- Leveraged **AWS S3** for scalable data storage and **TensorFlow**-powered analytics for advanced insights.

View-Only PDF Downloader for Google Drive | JavaScript, jsPDF, Canvas API

[LINK](#)

- Developed a script to download view-only PDFs by extracting and converting images into high-quality PDFs using **JavaScript** and **jsPDF**.
- Implemented **Trusted Types** for secure script loading and **Canvas API** for image processing and resolution preservation.
- Enabled direct PDF downloads via browser console, improving accessibility for view-only files.
- Optimized PDF generation to maintain aspect ratios and ensure perfect alignment on A4 pages.

SkillMingle - Freelancers Marketplace | React.js, Node.js, MongoDB

[LINK](#)

- Built a dynamic freelancing platform with **React.js** for a responsive and user-friendly frontend.
- Developed a scalable backend using **Node.js/Express**, integrating **MongoDB** for efficient data storage and **Redis** for fast caching.
- Implemented **real-time communication** between users with **Socket.io**, enhancing collaboration.

Technical Skills

Languages: HTML , C++, Java, SQL , Python , Javascript

Development: ReactJS, Tailwind , NodeJs

Data Science: NumPy, Pandas, Tensorflow, Matplotlib, Seaborn

Big Data Technologies: Hbase, Hadoop

BI Tools: Power BI, Tableau

Softwares: Github,Docker, Mongoddb , Visual Studio

Research Papers

- Deep Learning-based Lung Cancer Detection using Convolutional Neural Networks (CNN)
- Predictive Modeling of Heart Health Scores using XGBoost Model

Leadership & Extracurricular Activities

- Finalist, Smart India Hackathon 2024
- Winner, Gen AI Hackathon 2024
- Finalist, Hack 4 Purpose, IIT Delhi
- Organizer, Hack2Hire on Unstop