



Aryan Lokhande

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Education & Training

B. Tech in Artificial Intelligence and Data Science | Vishwakarma Institute of Technology, Pune | 01/09/2023 - Current | Pune, India

Artificial Intelligence, Machine Learning, Data Science, Deep Learning, Internet of Things (IoT), Database Management Systems, Object-Oriented Programming, Probability and Statistics, Optimization, Cloud Computing, and Software Design. Focus on data analysis, predictive modeling, algorithm development, and application of AI techniques to real-world problems within ethical, social, and business contexts.

Field of study Engineering, manufacturing and construction | Level in EQF 6 | Number of credits: 8.79/10

12th | Garware College of Science and Arts | 02/06/2021 - 01/04/2023 | Pune, India

Level in EQF 4 | Number of credits: 86/100

10th | Dr. Kalmadi Shamarao High School | 01/06/2011 - 01/06/2021 | Pune, India

Level in EQF 2 | Number of credits: 90.8/100

Language Skills

Mother tongue(s): **Marathi**

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	C1	C1	C1	C1	C1
German	B1	B1	B1	B1	B1

Skills

machine learning | deep learning | Multitasking, Adaptability, Creativity | Promotes teamwork | think critically | communication | solve problems | publish academic research | identify research topics | Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation | SQL | application development | Good knowledge in programming in Python | Cloud - AWS

Projects

F1 race prediction and tyre degradation prediction | 09/09/2025 - Current

predict tyre strategy for race using practice and qualifying sessions prior to the race

predict race winners and possible point scorers (1-10) using qualifying grid positions and past stats of drivers

using lstm + nn, take decisions in accident situations or weather change (rain)

<https://github.com/Aryan-Lokhande-17/F1-race-strat-predictor>

Chess Engine | 01/07/2025 - Current

Developed a neural-network-based chess engine using PyTorch and python-chess, implementing a ResNet-style

CNN with residual blocks, batch normalization, and ReLU activations to evaluate positions and predict optimal moves.

Designed dual-head architecture (Policy + Value networks) for move probability distribution and win prediction, trained via self play reinforcement learning and Monte Carlo Tree Search (MCTS) for exploration–exploitation balance.

Encoded chessboard states as multi-channel 8x8 tensors representing piece types, side-to-move, and castling rights; optimized learning through a combined Cross-Entropy and MSE loss objective.

Achieved ~ 1900 elo equivalent in self-play testing; integrated an interactive frontend chessboard UI for real-time move visualization and engine evaluation.

OceanFront - | 01/08/2025 - Current

Co-developing an intelligent ocean monitoring platform (“OceanFront”) that combines AI and ocean science to interpret temperature, salinity, and circulation data from diverse sources.

Designing models to understand key ocean dynamics such as water mass identification, mixed layer depth, and thermocline changes, providing insights into ocean structure and movement.

Building tools for climate and ecosystem analysis to study seasonal and regional variability, supporting predictions of large-scale events like El Niño, monsoon shifts, and global heat transport.

Advancing ocean and climate research by creating interpretable, data-driven outputs that aid in understanding ocean health, carbon storage, and long-term climate trends.

<https://github.com/Aryan-Lokhande-17/OceanFront>

KisaanSarthi | 08/03/2025 - 23/04/2025

created a website to help farmers in every aspect

can detect crop diseases just by clicking picture of the crop leaf and upload

created a mandi tab for farmers to see the minimum retail price set by government which updates in real time

get weather forecast, new workshops taking place nearby, alert farmers for government schemes

no farmer left behind

<https://github.com/RajwardhanMali/KisaanSathi>

Student Management System | 05/06/2024 - 23/11/2024

Built a web application that leverages Blockchain and IPFS to securely store and verify student data, attendance, and credentials. Combined PHP, Flask, and SQLite to manage records and ensure immutability of academic documents, enhancing trust and transparency in institutional data management.

<https://github.com/Aryan-Lokhande-17/Student-Credential-Distribution-system>

Gym-AI: A Computer Vision-Based Exercise Form Correction Assistant | 04/01/2024 - 13/04/2024

A virtual assistance which corrects your posture of exercise in real time

Developed a computer vision model using OpenCV and MediaPipe to detect and analyze human body movements during workouts.

Implemented real-time feedback and repetition counting system using Python to guide users toward correct exercise form.

Designed a user-friendly interface that compares user movements with reference videos for personalized exercise correction.

Publications

Student Management System using Blockchain,

Prof. Dr. Shital Dongre, Aryan G. Lokhande, Vedang A. Mahajan, Lochan K. Gabhane (2025). GRENZE International Journal of Engineering and Technology Vol. 11 , Issue 2, p12268-12275.

<https://thegrenze.com/index.php?display=page&view=journalabstract&absid=6061&id=8>

Gym-AI: A Computer Vision-Based Exercise Form Correction Assistant

Prof. Amruta Bhawarathi, Aryan Lokhande, Devraj Lokhande, Lochan Gabhane, Ajinkya Lende, Pradhynan L (2024).
Mukt Shabd Journal Vol. 13 , Issue 11.

<https://shabdbooks.com/volume-13-issue-11-november-2024>

https://drive.google.com/file/d/123fkH0uexh-aN9xIRBQEyV2T_rcmCiTF/view?usp=sharing

Volunteering

Quark | 10/07/2024 - Current | Pune

Solved doubts and taught junior students fundamanetals of coding and any problems related to mathematics.

Started as a volnteer, and now I am a finance head. Budgeted the club allowance, brought in sponsers for events, and helped organize various hackathons and expert talk to benefit batchmates and juniors.