



# Aryan Lokhande

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## Education & Training

**B. Tech in Artificial Intelligence and Data Science** | Vishwakarma Institute of Technology, Pune | 01/09/2023 - 01/05/2027 | 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

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## 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>

### **“CrossSafe: An Active Safety Framework for Automated Collision Intervention at Intersections**

2025. Springer ICSISCET 2025

<https://drive.google.com/file/d/1NPkFpCOePdgSY1J9uefhIGem6lIWwxq1/view>

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

Prof. Amruta Bhawarathi, Aryan Lokhande, Devraj Lokhande, Lochan Gabhane, Ajinkya Lende, Pradhyanan 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](https://drive.google.com/file/d/123fkH0uexh-aN9xIRBQEyV2T_rcmCiTF/view?usp=sharing)

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## 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

Used 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 chess engine and playable interface to play against the engine

Created engine in PyTorch and python-chess, implemented ResNet CNN with residual blocks, ReLU, batch normalization to evaluate positions.

Designed dual-head architecture for probability distribution and win prediction

Reinforcement learning for self play (used Monte Carlo Tree Search)

Achieved ~ 1900 elo equivalent in self-play testing.

#### **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>

#### **KisanSaathi | 08/03/2025 - 23/04/2025**

Motive : no farmer left behind

Simple to use

All in one app to cover all aspects of farming

Predicts disease via images using federated learning

Alerts farmers of government schemes, weather forecast, and real time crop prices

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

#### **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.

#### **Skills**

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machine learning | deep learning | Multitasking, Adaptability, Creativity | communication | publish academic research | identify research topics | Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation | Programming languages(Python, Java, R and C++) | application development | Cloud - AWS | database management systems

#### **Language Skills**

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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

#### Work experience

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**Chess Coach | Velankar Chess Institute |** 14/08/2024 - Current | Pune, India

Teach chess to anyone who is interested , age doesn't matter

Helped students prepare for tournaments

#### Volunteering

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**Quark | 10/07/2024 - Current | Pune**

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

Started as a volunteer, and now serve as a finance head. Budgeted the club allowance, secured sponsors for events, and helped organize various hackathons and expert talk to benefit batchmates and juniors.