europass

MEHTAB KHAN

Date of birth: 23/10/2001 | **Nationality:** Indian | **Gender:** Male | **Phone number:** (+91) 8668991037 (Mobile) | **Email address:** mehtabarkhan@gmail.com | **Website:** mehtabk.netlify.app | **LinkedIn:** linkedin.com/in/mehtabarkhan |

Address: A/301, Paras Apartment, Evershine City, 401208, Vasai, India (Home)

ABOUT ME

Being a Computer Engineering student, I am particularly intrigued with AI and geographical information system. My work in data-driven systems and solution has created a desire of me to solve problems in Earth Observation and spatial data analysis. I envision contributing to research in sustainable development and in advanced artificial intelligence models. This program will serve as a platform to hone the expertise as well as make a foundation to venture into advanced academic pursuits.

RESEARCH EXPERIENCE

09/2024 – 11/2024

Indian Institute of Technology Bombay (IITB), Mumbai

Fall Intern, Guide: Dr. Vikash K. Chauhan, Department of Metallurgical Engineering & Materials Science, IIT Mumbai

- Orchestrated and implemented real-time data monitoring systems using Arduino to track critical water quality parameters, including TDS, pH, and temperature, incorporating anomaly detection with 100% accuracy.
- Engineered data visualization dashboards with Firebase to deliver actionable insights and facilitate efficient decision-making.

05/2024 – 07/2024

Tata Institute of Social Sciences (TISS), Chembur

Summer Intern, Guide: Dr. Rakh Rashid Shaikh, RACHANA - A Resource Centre and Design Lab, TISS Chembur

- Conceptualized and developed AI course modules for TISSx, emphasizing user-centric frameworks to translate advanced AI concepts into relatable and practical applications for non-technical professors.
- Applied innovative instructional approaches, integrating visual aids such as high-quality graphs, infographics, and real-world case studies to simplify AI concepts for non-technical professors and enhance comprehension.

08/2023 – 09/2023

St. John College Of Engineering And Management, Palghar

Undergraduate Research Assistant, Guide: Mr. Vivian Brian Lobo, Department of AI/ML, SJCEM Palghar

- Conducted UX research for a blockchain-based digital marketplace aimed at securely trading digital assets like photos, videos, and songs.
- Shaped & optimized user-centric experiences, blockchain-driven interfaces to provide seamless navigation for buying and selling assets such as photos, videos, documents and songs.

WORK EXPERIENCE

11/2024 – CURRENT Mumbai, India

MACHINE LEARNING DEVELOPER TOTALI IT SOLUTIONS

- Developed over six projects using machine learning algorithms, including XGBoost, CNNs, and Random Forest, delivering scalable solutions across domains.
- Cleaned and transformed complex data (e.g., 100k+ rows across 194+ CSV files), ensuring accuracy and readiness for advanced analytics and modeling.

07/2023 – 09/2023 Mumbai, India
UI/UX DESIGNER CENTURY DIGITAL

- Increased website branding efficiency by 100% by designing a user-focused marketplace for artists, driving improved customer satisfaction rates (90%).
- Designed 10+ innovative logos for diverse clients, including three for individual companies, ensuring cohesive branding strategies and impactful portfolio presentations.

MANAGEMENT AND LEADERSHIP SKILLS

SathiBazzar, Chief-Technology Head, 2024

- Co-led the creation of SathiBazzar, a platform empowering MSMEs (Micro, Small and Medium Enterprises) by streamlining raw material procurement, enhancing collaboration, and boosting efficiency.
- Achieved top 600 out of 25,000+ registrations at Eureka 2024, Asia's largest startup competition, showcasing the platform's potential to transform the MSME sector.

Google Developer Student Club Lead, (GDSC) · 2023 - 2024

GDSC Lead, St. John College Of Engineering And Management, Palghar

- Founded and led the first-ever GDSC chapter at the institute, fostering a culture of innovation through hands-on events and workshops.
- Guided a team of 22 members to organize 6 high-impact events with 1,000+ registrations, creating a thriving tech community.

MindShift, Founder · 2022 - 2024

- Co-founded this startup project with the goal of making education more relevant for today's generation. A technology-focused curriculum impacting 30+ students, achieving a 40% improvement in engagement and retention with a focus on hands-on learning in areas such as AI/ML, programming, design, and AI tools.

PUBLICATIONS

ESP32-Based Intelligent Fire Detection System Utilizing Machine Learning for Enhanced Safety in Indian Micro and Small Enterprises

IEEE Transactions on Industrial Informatics *Link to abstract*

Marketplace for Digital Assets using Blockchain

International Journal of Computer Applications (IJCA) *Link to abstract*

AI Literacy for Educators: Developing Educational Modules on Artificial Intelligence

Preprint Published on ResearchGate *Link to preprint*

Fuel Delivery Management System: automate a manual system using computerized equipment and software

COPYRIGHT - Class and Description of the Work: Literary *Link to application*

EDUCATION AND TRAINING

12/2021 – 06/2025 India
BACHELOR OF ENGINEERING St. John College of Engineering and Management

Relevant Courses: Mathematics, Data Structure & Algorithm, Machine Learning, Computer Vision, Artificial Intelligence, Programming Language (C/C++, Python), Computer Network, Computer Graphics, DBMS, MIS

Field of study Computer Engineering | **Final grade** 7.28/10 |

Thesis ESP32-Based Intelligent Fire Detection System Utilizing Machine Learning for Enhanced Safety in Indian MSMEs

06/2019 – 09/2021 Vasai, India

INTERMEDIATE (COMPUTER SCIENCE) Vidya Vikasini English Junior College

Physics, Chemistry, Mathematics, Visual Basic, Computer Programming with C, HTML/CSS

Final grade 79%, A, (Summa cum laude)

VOLUNTEERING

2022 – 2024 Palghar

National Service Scheme, NSS

NSS Chapter SJCEM
Selected as a volunteer in NSS to promote environmental awareness by distributing plants to schools in rural India, fostering sustainability, ecological responsibility, and long-term community engagement among young learners.

2022 – 2023 Mumbai

Speak-Up World Foundation (NGO)

Student Volunteer
Experimental research on poverty and hunger, leveraging detailed data analysis in Microsoft Excel to identify key trends with 4 reports, highlight challenges, and propose actionable solutions to improve the lives of underprivileged communities.

DIGITAL SKILLS

Programming

Python | C++ | SQL | HTML - CSS - Js

Machine Learning/Computer Vsion

Jupiter-notebook | Google Collab | Frameworks & Libraries: OpenCV, Sci-kit learn, NumPy, Pandas, SciPy, Matplotlib.

Design

Prototyping | Figma & Sketch | Wireframing | UX | UI

Interpersonal Skills

Leadership | Problem Solving | Communication | Teamwork & collaboration

LANGUAGE SKILLS

Mother tongue(s): **HINDI** | **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROJECTS

High-Resolution NO_2 Air Quality Mapping Using AI/ML and Satellite Data Downscaling with TensorFlow and PyTorch

Transform low-resolution satellite data into high-resolution NO_2 air quality maps. Built for Smart India Hackathon 2024, it empowers researchers and policymakers with precise insights for better environmental monitoring & decision-making. *GitHub*

RNN-Based Machine Learning for 36-Hour Solar Energy Surplus Forecasting

RNN-based ML model forecasts 36-hour solar energy surplus using a unified 100k-line dataset. It helps programs like Colchester's identify surplus periods, enabling free energy distribution and promoting sustainability. *GitHub*

Real-Time Drowsiness Detection Using CNN, EAR, and ECR for Enhanced Driver Safety

A computer's webcam along with Python-based libraries like OpenCV, dlib, and CNN for detecting drowsiness. It monitors eye movements by calculating the Eye Aspect Ratio (EAR) and Eye Closure Ratio (ECR), alerting the user to prevent accidents caused by fatigue. *GitHub*

Hybrid Sentiment Analysis on Financial News Using Rule-Based & Machine Learning Models with Dash Dashboard

Rule-based and machine learning models for sentiment analysis of financial news from The Guardian API, providing insights and comparisons with VADER, all visualized on a real-time interactive Dash dashboard. *GitHub*

Loan Default Prediction System Using Logistic Regression, Random Forest, and XGBoost with Flask Web Interface

This project uses machine learning algorithms; Logistic Regression, Random Forest, and XGBoost, to predict the likelihood of a loan default, with predictions displayed on an intuitive Flask-powered web interface. *GitHub*

CONFERENCES AND SEMINARS

Tajurba MSME Growth Summit - Mumbai, India

Youngest attendee in the Tajurba MSME Growth Summit.

Mumbai Hacks'24 - Mumbai, India

Guinness World Record - Largest Hackathon in Gen AI

Stellar Builder Residency - Bengaluru, India

Google Developer Groups Devfest'22 - Mumbai, India

HOBBIES AND INTERESTS

Photography, Cyclist, Travelling, Book Reader

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

AI/ML for Geodata Analysis - Indian Space Research Organisation (ISRO)

Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System - Indian Space Research Organisation (ISRO)

Supervised Machine Learning: Regression and Classification - DeepLearning.AI

Advanced Learning Algorithms - Stanford University

Deep Learning, Computer Vision And Object Detection Workshop - Krish Naik Academy

Google AI Essentials - Google

Understanding Research Methods - University of London