

MEHTAB KHAN

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ABOUT ME

Computer Engineering undergraduate with strong keen interest in machine learning, neural networks and LLMs, aspiring to pursue a PhD. Dedicated to contributing to the development of AGI through fundamental research in robust learning algorithms and theoretical frameworks that advance machine learning systems generalization capabilities.

RESEARCH EXPERIENCE

Indian Institute of Technology Bombay (IITB), Mumbai

Sep'24 - Nov'24

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.

Tata Institute of Social Sciences (TISS), Chembur

May'24 - Jul'2024

Summer Intern, Guide: Dr. Rafikh 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.

St. John College Of Engineering And Management, Palghar

Aug'23 - Sep'23

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

Machine Learning Developer - Totali IT Solutions, Mumbai

Nov'24 - Present

- 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.

UI/UX Designer - Century Digital, Mumbai

Jul'23 - Sep'23

- 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.

LEADERSHIP EXPERIENCE

SathiBazaar

2024-2024

Chief-Technology Head

- Co-led the creation of SathiBazaar, 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 (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 edtech

2022-2024

Co-Founder

- 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

Mehtab Khan, Piyush Mishra, Rehan Khan, Vishal Maurya, and Aditi Raut “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](#)

Kartik Mishra, Mehtab Khan, Prince Mishra, Saish Padhye, Abhishek Wagralkar and Vivian Brian Lobo, “Marketplace for Digital Assets using Blockchain” International Journal of Computer Applications (IJCA) [Link to abstract](#)

Mehtab Khan, “AI Literacy for Educators: Developing Educational Modules on Artificial Intelligence” preprint published on ResearchGate [Link to preprint](#)

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Class and Description of the Work: Literary, Titled: “Fuel Delivery Management System: automate a manual system using computerized equipment and software” [Link to application](#)

EDUCATION

St. John College of Engineering and Management, University of Mumbai

2021-2025

BE. Computer Engineering, CGPA - 7.28/10

Palghar, INDIA

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

Vidya Vikasini English High School & Junior College

2019-2021

Computer Science, Grade 12, 79% /100

Vasai, INDIA

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

VOLUNTEERING EXPERIENCE

National Service Scheme (Indian government public service)

2022-2023

NSS Chapter SJCEM

INDIA

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.

Speak-Up World Foundation (NGO)

Jul'22 - Aug'22

Student Volunteer

INDIA

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.

SKILLS

Programming: Python, SQL, HTML/CSS, Javascript

Machine Learning/Computer Vision: Jupyter-notebook, Google Collab, Frameworks & Libraries: OpenCV, Sci-kit learn, NumPy, Pandas, SciPy, Matplotlib

Design: Prototyping, Figma, Sketch, Wireframing

Interpersonal Skills: Leadership, Critical thinking, Communication, Problem Solving, Design thinking

Entrepreneurship: Business Acumen. Fundraising, Networking, Pitching, Public Speaking

Language: English (*Understanding C2, Speaking C2, Writing C1*), Hindi and Urdu (*Mother tongue*)

PROJECTS

Affordable Intelligent Fire Detection System for Small Businesses Using ESP32 and Machine Learning-Based Real-Time Image Processing, *Final Year Project* [Project website](#)

Hybrid AI Model for Real-Time Financial News Sentiment Analysis with Interactive Dashboard and API Integration [Github](#)

ML Model Predicting Loan Default Risk with Logistic Regression, Random Forest, XGBoost, and Web Interface [Github](#)

Drowsiness Detection System Using CNN, EAR, and ECR for Autonomous Vehicle Monitoring [Github](#)

RNN Model for Predicting 36-Hour Solar Energy Surplus for Enhanced Efficiency and Sustainability [Github](#)

Yummo: A Web Application Uniting People Through Food, Catering to Diverse Dietary Needs with Gemini API [Github](#)

CERTIFICATIONS

Jul'23 - Present

Supervised Machine Learning: Regression and Classification (DeepLearning.AI)

Advanced Learning Algorithms (Stanford University)

Unsupervised Learning, Recommenders, Reinforcement Learning (Stanford University)

Advanced LLM Fine-Tuning: Hands-on Implementation Workshop (Krish Naik Academy)

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

Google AI Essentials (Google)

Prompt Engineering for ChatGPT (Vanderbilt University)

Understanding Research Methods (University of London)

HOBBIES & EXTRA CURRICULAR

Photography | Drawing | Reading Books | Traveling | Basketball