**KAJAL PATEL**

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# Professional Summary

# Machine Learning Engineer, Data Specialist & Software Developer with 3+ internships and 5+ projects in AI/ML, Computer Vision, and Data Analytics. Proven expertise in Python, TensorFlow, PyTorch, MySQL, and Azure. Achieved 97% model accuracy in real-time systems and enhanced business decision-making through data visualization. Seeking roles in Data Analytics, Computer Vision, AI/ML Engineering, or Software Development.

# Skills

**Proficient in** Python, C++, Data Structures and Algorithms, MySQL, Tensorflow Machine Learning, MongoDB, Keras.

**Familiar with** HTML,Java, Javascript, R, Django, C, Blockchain, Generative AI, LLMs, Azure, Tableau.

# Work Experience

## International Business Machines (IBM) | Project Intern Jun’24 – Jul’24

* Developed an LSTM model for Video Game Character Movement Prediction, improving trajectory forecasting accuracy by 15%.
* Applied computer vision techniques to process 500+ frames/sec in real-time gameplay datasets.

## Data Visualisation: Empowering Business with Effective Insights by Forage (TATA) | Intern Jun’23 - Jun’24

* Created 10+ interactive Tableau dashboards analyzing TCS business data, enabling senior leadership to identify market trends 30% faster. Formulated 5+ strategic questions for executive meetings, directly influencing resource allocation decisions.

## People’s Science Institute | Summer Intern Jun’22 - Jul’22

* Analyzed air pollution datasets (5K+ entries) using MS Excel, uncovering 3 key emission trends through advanced visualizations. Designed system maps via Kumu app, improving spatial analysis efficiency by 25%.

# Projects

**Sign Language Recognition System Jan’25 – May’25**

* Developed a real-time gesture recognition system with 97% accuracy, integrating voice/text output for seamless user interaction.
* Trained LSTM model on 45K+ gesture samples, reducing prediction latency to <0.2 seconds.

**MindAid Aug’24 – Nov’24**

* Developed an AI-driven mental health chatbot utilizing advanced Natural Language Processing (NLP) and Deep Learning techniques (LSTM), enhancing user interaction through a responsive and intuitive UI/UX design.
* Implemented a real-time sentiment analysis feature within the chatbot, enabling personalized support and timely interventions for users.

## YogaMate: Yoga Instructor in your Pocket Sept’23 - May’24

* Engineered a real-time posture detection system on 20 poses using OpenCV and MediaPipe, deploying it as a Flask-based web app with Angular frontend. Implemented CNN for posture analysis.
* Designed user-friendly interface for yoga guidance and education.
* Developed a real-time posture detection system featuring angle analysis and an incorrect pose warning mechanism to improve user safety and effectiveness.

# Education

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| **University of Petroleum and Energy Studies, Dehradun, India** |  |
| ● B.Tech in Computer Science & Engineering  **Indore Public School, Indore, India** |  |

● Higher Secondary School

# Certificates & Achievements

* SPR(Student Placement Representative)- (2023-2025).
* Actively participated in Bootcamp organized by DevTown in collaboration with Microsoft in the year 2022-2023.
* Career Essentials in Generative AI- Microsoft and LinkedIn.
* Copyright of YogaMate: Yoga Instructor in your Pocket.
* Professional certificate Microsoft Azure AI-102.
* Badge in Introduction to Generative AI.
* Badge in Introduction to Large Language Models.