

# OMKUMAR VAGHASIYA

(AI/ML Researcher)

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Portfolio: om-vaghasiya.netlify.app

## EDUCATION

**Indian Institute of Science Education and Research, Bhopal** (Aug 2023 – June 2027)  
B.Tech/BS (Computer Science and Engineering), CGPA: 8.03/10 (DST-INSPIRE FELLOW)

- Relevant Coursework: Data Structures & Algorithms, Probability & Statistics
- Interests: **Machine Learning, Deep Learning, Computer Vision**

## EXPERIENCE

**Research Intern | Voice-Controlled Robotics | IISER Bhopal** (Present)

- Working on developing a voice-command-based robotic system integrating speech recognition, NLP, and computer vision.
- Implementing real-time object detection (OpenCV, YOLO) and speech-to-text processing (VOSK, Google API) for robotic control.
- Utilizing Raspberry Pi/Arduino to execute voice-driven actions with motion planning algos.

**MERN-stack Intern | AppMixo | Surat** (May 2024 – Jul 2024)

- Gained industrial exposure to web development using HTML, CSS, JavaScript, and React.js.

## PROJECTS EXTRACURRICULARS

**Stock Market Prediction Bot** (Personal Project – Present)

- Building a stock prediction bot using LSTMs, Reinforcement Learning (TensorFlow, Keras, PyTorch).
- Processing data from Yahoo Finance API (Pandas, NumPy) and visualizing trends (Matplotlib, Seaborn).

**Customer Churn Prediction using ANN** (Personal Project)

- Implemented ANN for churn prediction with data preprocessing, feature engineering, model training, and evaluation.
- TensorFlow, Keras, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn.

**Computing and Networking Council (CNC)** (Active Member, Developer Team)  
IISER Bhopal

- Work with a team and Contribute to project planning, coding, and debugging, supporting various campus initiatives.

## TECHNICAL SKILLS

**Programming:** Python, C

**AI/ML Frameworks:** Exploring Scikit-learn, TensorFlow-Keras, PyTorch, OpenCV, YOLO, Detectron2

**CV/NLP Tools:** Hugging Face Transformers, SpaCy, NLTK, MediaPipe

## CERTIFICATIONS

**Machine Learning Specialization** (Coursera - by Andrew Ng)

- Studied key supervised and unsupervised learning concepts, including regression, multiclass classification, and Neural Networks with hands-on assignments.