# BHARGAVKUMAR **PANCHAL**

**Email:** bhargavpanchal5151@gmail.com
**LinkedIn Profile:** https://www.linkedin.com/in/bhargavpanchall/
**GitHub:** https://github.com/bbhargavpanchal
**Address:** London, United Kingdom. **Phone:** (+44) 07741077302

A highly motivated and skilled Computer Engineer with hands-on experience in Software Development, Deep Learning, and Machine Learning. Proven ability to build web applications, implement computer vision solutions, and collaborate on innovative AI-driven projects. Eager to contribute technical expertise to impactful, real-world solutions.

## SKILLS

**Programming Languages:** Python, Java, JavaScript, HTML, CSS
**Frameworks & Tools:** Flask, Django, Streamlit, LabelImg, Roboflow, YOLO (v4/v5/v8)
**AI/ML:** TensorFlow, PyTorch, Scikit-learn, NLP
**Databases:** SQL, MySQL, AWS
**Version Control:** Git, GitHub
**Soft Skills:** Problem-solving, teamwork, communication, and a fast learner
**Languages:** English, Gujarati, Hindi

## EDUCATION

### MSc. Artificial Intelligence,

**LONDON METROPOLITAN UNIVERSITY, LONDON, UNITED KINGDOM.**
September 2024 – September 2025

### Bachelor of Engineering (B.E.) in Computer Engineering,

**SARDAR VALLABHBHAI PATEL INSTITUTE OF TECHNOLOGY, VASAD, INDIA.**
June 2019 - June 2023

## WORK EXPERIENCE

### Deep Learning Engineering – Intern,

**RESOLUTE AI SOFTWARE, BENGALURU, INDIA.**
June 2023 – September 2023

- Worked on real-time deep learning projects involving YOLOv4/v5/v8 for object detection
- Contributed to tasks like plant detection, towel detection, and PDF data extraction
- Gained experience with remote teamwork, Roboflow, LabelImg, and Streamlit tools

Python Development for AI/ML,

**MYKARSOL TECHNOLOGIES, VADODARA, INDIA.**

February 2023 – May 2023

- Developed a house price prediction system using Flask and ML algorithms
- Built livestock price prediction tools using RNNs and historical data
- Integrated Google Drive API and Google Sheets API for real-time data handling

Software Developer,

**TNTRA, VADODARA, INDIA.**

June 2022 – July 2022

- Worked with Java, Python, Django, and Spring Boot for full-stack application development
- Participated in Agile sprints and collaborated with cross-functional teams
- Gained practical experience in Git version control and relational databases (MySQL)

## PROJECT ACTIVITIES

### Brain Tumor Segmentation with U-Net CNN:

- Implemented U-Net architecture in TensorFlow to segment brain tumors in MRI scans using a dataset of 3,064 images.
- Achieved a Dice Coefficient of 80.56%, Precision of 83.5%, and Recall of 77.81%.
- Used OpenCV for preprocessing and matplotlib/seaborn for result visualization.

### PPE Detection using Deep Learning:

- Developed an object detection system for monitoring PPE compliance using TensorFlow (VGG16 + SSD architecture).
- Applied advanced image preprocessing techniques (CLAHE, blending, flipping, rotation).
- Achieved high accuracy on a real-world Roboflow dataset with multi-class detection.

### Multimodal Smart Environment Control (Voice + Gesture + IoT):

- Designed and implemented a smart home system using Raspberry Pi, Arduino UNO, Azure IoT Hub, OpenCV, and Flask.
- Integrated gesture and voice recognition for real-time device control.
- Built secure MQTT communication and UART protocols between devices.

### IoT-Based Automatic Room Light Controller with Visitor Counter:

- Developed an energy-efficient IoT system using Arduino, IR/PIR sensors, and LCD
- Counts people in and out of rooms to automatically manage lighting
- Aimed at reducing electricity wastage in educational and commercial settings

Demo: https://drive.google.com/file/d/1qqWkRzkHzvqHCIkHLH_uwxgYeBJrHfV3/view