

# UMAR MAZHAR

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## ABOUT ME

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I'm deeply passionate about computer science, particularly natural language processing (NLP) and computer vision. Proficient in both areas, I'm committed to advancing AI research and innovation.

## WORK EXPERIENCE

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[24/06/2024--continue] **Artificial Intelligence Intern**

**ITSOLERA Pvt Ltd**

Islamabad, Pakistan

## EDUCATION AND TRAINING

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[07/09/20 - 30/06/24] **BS Computer Science**

**Final grade:** 3.0/4.0

**THE UNIVERSITY OF CHAKWAL (UOC)** <https://uoc.edu.pk/>

**Field of Study:** Machine Learning and Deep Learning

**Final year project:** Digital Advertising with Artificial Intelligence using Machine Learning & Deep Learning.

**Main Subject / occupational skills covered:**

Machine Learning, Deep Learning, Image Processing, Computer Vision.

## PROJECTS

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### Digital Advertising with AI (Text-to-Video)— Python, NLP, Deep Learning

- Developed a text-to-video-based advertising system.
- Trained tacotron-2DCA deep learning model on Dataset LJSPEECH for TTS (Text to Speech).
- Leveraged Sadtalker for Audio-Driven Single Image Face Animation, enhancing the visual appeal and engagement of the advertising content.
- Created a User-friendly Web app using Flask.

### Mobile Health Application with heart disease prediction—Python, Machine Learning

- Trained a dataset of heart disease patients.
- Applied logistic regression algorithm.
- Applied hot encoding on the dataset.
- Obtained 81% accuracy on the Test Dataset.

Advanced ASL Recognition using Deep Learning

- Developed an advanced ASL recognition system using deep learning techniques.
- Trained convolutional neural networks (CNNs) on a custom dataset of ASL gestures for accurate sign language recognition.
- Integrated the model into a real-time application for improved communication accessibility for the deaf and hard-of-hearing community.

Detecting Violence in Video

- Developed a deep learning model to detect violence in video content.
- Implemented an automatic trigger warning generation system for videos containing violent content.
- Achieved over 90% accuracy in detecting violent content using transfer learning techniques.
- Utilized datasets such as the Violent Flows Dataset and the Hockey Fight Videos Dataset for model training and validation.

TECHNICAL SKILLS

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Languages:	Python, JavaScript, C++
Libraries and Frameworks:	Pandas, Matplotlib, Tensorflow and TF Lite, Pytorch, Opencv, Flask
Software & Tools:	Anaconda, PyCharm, VS Code, Colab, Jupyter
Skills:	Machine Learning, Deep Learning, Computer Vision, API Development,