

Abu Shahid

Final (B.Tech); CSE @IIT Jodhpur

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Education

B.Tech in Computer Science and Engineering	<i>IIT Jodhpur</i>
<i>8.61 CGPA</i>	<i>2020-2024</i>
Intermediate	<i>City Montessori School, Lucknow</i>
<i>98.5% CISCE</i>	<i>2017-2019</i>
High School	<i>St. Thomas College, Lucknow</i>
<i>96% CISCE</i>	<i>2005-2017</i>

Experience

Microsoft- Bing *July'23- May'24*
Research Assistant *Bing, India*

- Worked on multiple-moment retrieval from videos using natural language queries, exploiting audio and visual modalities.
- Used Video Language Models, Youtube-8M and GPT4o to generate novel dataset with 12500+ datapoints.
- Paper draft submitted to BMVC'24.
- *PyTorch, SQL, Python, Prompt Engineering, VLMs*

Decimal Point Analytics *May'23- July'23*
Data Science Intern *Mumbai, India*

- Developed state-of-the-art models for Optical Character Recognition, catering to specific use case of financial document recognition.
- Delivered novel dataset with 2 million plus datapoints and improved over all inference time and performance.
- *PyTorch, Python, SynthTIGER, Parseq*

Anonymizer Hackathon by Govt. of WB *Mar'23- Aug'23*
Silver Medalist

- Secured second position among 500+ teams, providing solutions for surveillance video and natural document anonymization, demonstrating scalable architecture balancing security and utility.
- Tuned the surveillance model for resource constrained cameras.
- *OpenCV, YOLO, Python*

NCVPRIPG'23 *Jan'23- July'23*
Challenge Organizer *IIT Jodhpur*

- Challenge organizer of '**Summer Challenge on Writer Verification**' @ NCVPRIPG'23, managing the end-to-end process of the project, starting with data creation and cleaning. Established baseline performance for the model development.
- Developed interactive website, conducted QnA sessions, and prepared conference proceedings for NCVPRIPG'24.
- *PyTorch, SQL, Python*

Introduction to Machine Learning

Aug'22- Dec'22; Aug'23- May'24

Teaching Assistant

IIT Jodhpur

- Supported students' learning as a TA for the course by preparing lab questions, participating in weekly lab sessions, and addressing students' doubts.
- *Numpy, Jupyter, Google Colab*

Google Developer Student Club

Jun'22- Aug'23

Cyber Security Team Lead

IIT Jodhpur

- Spearheaded the Cyber Security vertical of the club
- Organized CTF events and provided guidance to the community
- *Metasploit, Burp Suite, Wireshark*

Projects

Feature-based Image Stitching Benchmark

Jan'23- March'23

OpenCV, Python

- Pioneered a novel approach combining feature extraction, matching, and blending stages for image processing pipelines.
- Evaluated the effectiveness of the approach using Google Landmarks database and a custom dataset, measuring accuracy, speed, and visual quality.
- **Links:** github; paper; youtube

Indic OCR

Jan'23- July'23

OpenCV, PyTorch

- Developed an OCR system for handwritten Hindi text, employing classical methods like VGG, RCNN, and ResNet
- Achieved 91% validation label accuracy and 97% character accuracy, implementing Permuted Autoregressive Sequence Models.
- **Links:** web

ISRO (Inter-IIT TechMeet)-Automatic Identification of Solar Bursts

Feb'22- March'22

AstroPy, Flask, Python

- Developed a statistical learning model and web-based application to detect and categorize X-ray bursts.
- Attained 95% accuracy for most categories, effectively analyzing and categorizing complex X-ray data.
- **Links:** github ; youtube

Histopathologic Cancer Detection

Jan'22- May'22

Pytorch, Streamlit

- Conducted exploratory data analysis on tumor data and trained machine learning models to classify tumors.
- Developed a web-based application for tumor detection, showcasing expertise in data analysis and web development for medical applications.
- **Links:** report;

Extracurricular activities

Student Mentor @Student Wellbeing Committee

Public Relations Head @Prometheo'23; Technical Fest @IIT Jodhpur

Core Member @LitSoc; Literature Society @IIT Jodhpur

Class Representative of B20CS'24

Initiator @Suckoon; The Word-Games Group