



# Alisha Raza

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**Gender**: Female **Date of birth**: 09/01/1998 **Nationality**: Indian

## ABOUT ME

I am currently working as an Assistant Professor in the Department of Computer Science and Engineering at **Maulana Azad National Urdu University** , Hyderabad. I am a dedicated professional with a passion for advancing the frontiers of technology through the application of Deep Learning, Machine learning and the power of Python. With a strong academic foundation and a practical orientation, I bring a wealth of knowledge and hands-on experience to the realm of artificial intelligence. Holder of an MTech degree from Maulana Azad National University, specializing in Deep Learning, setting the stage for advanced research endeavors. Actively engaged in pioneering research within the domain of Deep Learning and Machine learning, consistently contributing to its evolution through impactful insights and novel methodologies.

## WORK EXPERIENCE

[ 01/10/2022 – Current ]

### Assistant professor

#### *KG Reddy College of Engineering and Technology*

**City**: Hyderabad

**Country**: India

Responsibilities

#### **Teaching and Curriculum Development:**

I design and deliver courses aligned with program goals, creating dynamic materials. Additionally, I guide students through projects, thesis, and dissertations, fostering a comprehensive educational experience that integrates theory with practical application.

#### **Research and Publication:**

I actively pursue external research grants to enhance research projects and advance our lab facilities. Through collaboration with fellow faculty members, research teams, and students, I am dedicated to fostering a culture of research excellence that propels academic innovation and contributes to the broader scholarly community.

#### **Professional Development:**

Diligently staying current through conferences and workshops, I prioritize continuous learning. Committed to self-improvement, I engage in professional development, refining both teaching and research

[ 01/06/2021 – 31/08/2022 ]

### Data analyst

#### *Safa India*

**City**: Hyderabad

**Country**: India

- Gather data from various sources, including databases, spreadsheets, and external data providers.
- Ensure data is accurate, complete, and properly documented.
- Collaborate with data engineers or IT teams to access and retrieve data.

## EDUCATION AND TRAINING

[ 01/08/2019 – 01/05/2021 ]

### Master of Technology

**Maulana Azad National Urdu University** <https://manuu.edu.in/>

**City:** Hyderabad

**Country:** India

**Field(s) of study:** Computer Science and Engineering

**Final grade:** 8.4/10.0

**Number of credits:** 88

**Thesis:** Detection Danger: AI Enabled Crack Detection for Autonomus Vehicles

**Link:** [https://drive.google.com/drive/folders/1c4oGuJz\\_HcPNX8VHYremc15keO8IEHLK?usp=sharing](https://drive.google.com/drive/folders/1c4oGuJz_HcPNX8VHYremc15keO8IEHLK?usp=sharing)

this article introduces the innovative "Faster-Region Convolutional Neural Network" (Faster-RCNN) approach for crack detection on roads, particularly designed for autonomous cars. By incorporating feature extraction, preprocessing, and classification techniques, the model analyzes diverse image datasets, including camera images, Faster-RCNN laser images, and real-time captures. Utilizing GPU acceleration enhances image processing efficiency, enabling accurate measurement of road density and acquisition of crucial information for road crack classification. The proposed Faster-RCNN technique demonstrates superior precision compared to existing methods, marking a significant advancement in the domain of autonomous vehicle navigation and road safety.

[ 01/08/2016 – 01/05/2019 ]

### Bachelor of Technology

**Maulana Azad National Urdu University** <https://manuu.edu.in/>

**City:** Hyderabad

**Country:** India

**Field(s) of study:** Computer Science and Technology

**Final grade:** 72/100

**Number of credits:** 171

**Thesis:** Online University Voting System

[ 01/08/2013 – 01/05/2016 ]

### Diploma in Information Technology

**Maulana Azad National Urdu University** <https://manuu.edu.in/>

**City:** Hyderabad

**Country:** India

**Field(s) of study:** Information Technology

**Final grade:** 84/100

## DIGITAL SKILLS

Java | Pytorch, Tensorflow | Data Structure and Algorithm | Java Script | React | Python | Matlab | artificial intelligent | Deep Learning,

## PUBLICATIONS

[ 2023 ]

### Detection Danger: AI Enabled Road Crack Detection for Autonomous Vehicle

**R Alisha**, K Debnarayan, D Rachaita

E3S Journal

Scopus indexed

The present article proposes the deep learning concept termed —Faster-Region Convolutional Neural Network|| (Faster-RCNN) technique to detect cracks on road for autonomous cars. Feature extraction, preprocessing, and classification techniques have been used in this study. Several types of image datasets, such as camera images, faster-RCNN laser images, and real-time images, have been considered. With the help of GPU (graphics processing unit), the input image is processed. Thus, the density of the road is measured and information regarding the classification of road cracks is acquired. This model aims to determine road crack precisely as compared to the existing techniques.

[ 2023 ] **A Comprehensive Blockchain's Role in Smart Grids Cybersecurity**

K Aslam, KHabib, **R Alisha**

Smart Cities Journal

6.2 impact factor

under review

This paper proposed a navigate the evolution of the smart grid, emphasizing its shift from a centralized to a decentralized topology to efficiently integrate renewable energy sources. Recognizing the challenges inherent in this transition, we investigate the transformative role of blockchain in addressing security concerns within smart grid scenarios. From centralized generation to distributed renewable sources, our exploration encompasses the intricacies of energy transmission, distribution, and end-user infrastructure. By reviewing recent blockchain-based research, we contribute to a robust framework for optimizing the modern energy grid, offering insights into the specific challenges and future directions in securing smart grids through blockchain applications.

[ 2024 ]

**Content Based Medical Image Retrieval Method using Multiple Pre-trained Convolutional Neural**

AAli, **RAlisha**

IJAAS 240042 Journal

6.2 Impact factor

Scopus Indexed

Submitted

This paper present a novel Content-based Medical Image Retrieval (CBMIR) method leveraging a Cognitive Attention Network within Convolutional Neural Networks (CNN) models. The proposed approach capitalizes on cognitive attention mechanisms to enhance feature extraction and retrieval accuracy in medical image datasets. Through the integration of advanced CNN architectures, this method demonstrates superior performance in effectively retrieving relevant medical images, presenting a promising avenue for refined and efficient content-based retrieval in the realm of medical imaging.

**PATENTS**

[ 01/12/2022 – 12/01/2024 ]

**Effective IOT Monitoring by Applying ML Technologies to Reduce Dimensions for Traffic Data and the Detection of Intrusions.Indian Patent 202341084819, filled 12/12/2023.**

Dr. Pandi. Chiranjeevi, Hafsa Ihtesham Uddin Ahmed, Ghousia Begum, **Alisha Raza**, KRa mesh

**Link:** [https://drive.google.com/file/d/1dc9Xe\\_neluRsOu3UX8ltGPKWFjpE-eB-/view?usp=drive\\_link](https://drive.google.com/file/d/1dc9Xe_neluRsOu3UX8ltGPKWFjpE-eB-/view?usp=drive_link)

[ 07/10/2022 – 01/12/2023 ]

### **Content Based Medical Image Retrieval Method using Multiple Pre-trained Convolutional Neural**

This project presents a novel Content-based Medical Image Retrieval (CBMIR) method leveraging a Cognitive Attention Network within Convolutional Neural Networks (CNN) models. The proposed approach capitalizes on cognitive attention mechanisms to enhance feature extraction and retrieval accuracy in medical image datasets. Through the integration of advanced CNN architectures, this method demonstrates superior performance in effectively retrieving relevant medical images, presenting a promising avenue for refined and efficient content-based retrieval in the realm of medical imaging.

[ 12/01/2022 – 30/10/2023 ] **A Comprehensive Review of Blockchain's Role in Smart Grids Cybersecurity**

This project proposed a navigate the evolution of the smart grid, emphasizing its shift from a centralized to a decentralized topology to efficiently integrate renewable energy sources. Recognizing the challenges inherent in this transition, we investigate the transformative role of blockchain in addressing security concerns within smart grid scenarios. From centralized generation to distributed renewable sources, our exploration encompasses the intricacies of energy transmission, distribution, and end-user infrastructure. By reviewing recent blockchain-based research, we contribute to a robust framework for optimizing the modern energy grid, offering insights into the specific challenges and future directions in securing smart grids through blockchain applications.

[ 01/10/2022 – 01/10/2023 ]

### **Detection danger: AI Enabled Road Crack Detection for Autonomous Vehicles**

The project proposes the deep learning concept termed —Faster-Region Convolutional Neural Network (Faster-RCNN) technique to detect cracks on road for autonomous cars. Feature extraction, preprocessing, and classification techniques have been used in this study. Several types of image datasets, such as camera images, faster-RCNN laser images, and real-time images, have been considered. With the help of GPU (graphics processing unit), the input image is processed. Thus, the density of the road is measured and information regarding the classification of road cracks is acquired. This model aims to determine road crack precisely as compared to the existing techniques.

**Link:** <https://colab.research.google.com/drive/1dR2Tcijri8FaRfGfiH-jVeTdlGI1OFRM?usp=sharing>

[ 01/08/2023 – 15/09/2023 ] **Hotstar Clone**

- Home Page Design and Footer
- Movie Details and Playback
- User Profile and Settings
- Sidebar Design and Mouse Hover Interaction
- Watchlist Section

**Link:** <https://hotstar-five.vercel.app/>

[ 01/02/2023 – 01/07/2023 ] **Meal Planner**

It has become difficult to manage and plan daily meals for the average citizen due to the modern busy lifestyle. Among the enormous data present on the internet, it becomes very time-consuming to find new recipes and get all details of that recipe in one place. scripton...

**Link:** [alisharaza.github.io/meal-planner-project---javascript-project---v0efa0lus0n9/](https://alisharaza.github.io/meal-planner-project---javascript-project---v0efa0lus0n9/)

[ 01/01/2019 – 01/05/2019 ] **ONLINE UNIVERSITY VOTING SYSTEM**

- Designed a threat-free secure online university voting system that sends OTP to the registered user on their mobile using which they can cast their vote. description...

## CONFERENCES AND SEMINARS

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[ 01/12/2023 – 02/12/2023 ] **Research in Intelligent Computing in Engineering** Hyderabad

8th International Conference on Computational Methods, Data Science and Applications during 1st – 2nd December, 2023. Organized by Department of Computer Science and Technology, Maulana Azad National Urdu University.

[ 05/09/2023 – 08/09/2023 ] **ICMPC Conference** London

Contribute in 3 Days International Conference on Computational Methods, Data Science and Applications during 5th – 8th September, 2023. Organized by Northumbria University, London..

[ 24/05/2021 – 25/05/2021 ]

### **National Conference on Computational Methods, Data Science and Applications**

Hyderabad

7th National Conference on Computational Methods, Data Science and Applications during 24th – 25th May, 2021. Organized by Maulana Azad National Urdu University, Hyderabad

[ 01/05/2018 – 01/05/2018 ] **Ethical Hacking** Hyderabad

Seminar on Ethical Hacking, Organized by Maulana Azad National Urdu University.

[ 16/01/2024 – 20/01/2024 ]

### **Faculty Development Program on Emerging Research Trends in Computer Science**

MANUU Hyderabad, India

Participated in a comprehensive Faculty Development Program focused on exploring and staying abreast of the latest research trends in Computer Science. The program provided an in-depth understanding of emerging technologies, methodologies, and applications within the field. Sessions covered diverse topics, including but not limited to artificial intelligence, machine learning, data science, cybersecurity, and software engineering. Engaged in interactive workshops, discussions, and hands-on sessions to enhance pedagogical approaches and research methodologies. This program enriched my knowledge and equipped me with valuable insights to integrate cutting-edge advancements into both teaching and research activities.

## COMMUNICATION AND INTERPERSONAL SKILLS

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### TOEFL Marks: 91/120

Listening=25

Reading=27

Speaking=12

Writing=27

**Link:** <https://drive.google.com/file/d/1uosv-eUgnji-gtAsPHtEF9t5Ed3YChrl/view?usp=sharing>

### GRE Marks:312/340

Verbal Reasoning=158

Quantitative Reasoning=167

Analytical Reasoning=3.5

## RECOMMENDATIONS

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### Assistant professor

**Name:** Syed Arfath Ahmed

**Phone number:** (+91) 9491742608

**Email:** [arfath.ahmed@gmail.com](mailto:arfath.ahmed@gmail.com)

I have known Alisha Raza since 2016 as a under graduate student in Computer Science and Engineering. I taught her three courses in graduate related to Digital Image Processing. She performed very well in these courses . As a graduate student, she is curious about different algorithms. We also had many interactive sessions for three semesters

### Assistant Professor

**Name:** Dr. Syed Mohd Fazalul Haque

**Phone number:** (+91) 9247420701

**Email:** [fazal.manuu@gmail.com](mailto:fazal.manuu@gmail.com)

I have had the pleasure of working alongside Alisha Raza since 2019 when she was an undergraduate student in Computer Science and Engineering. During her graduate studies, I had the opportunity to teach her in one course related to Deeplearning. Alisha consistently excelled in these courses, demonstrating a commendable understanding of the subject matter. As a graduate student, she exhibited a genuine curiosity about different algorithms, and our interactive sessions over three semesters reflected her strong commitment to academic growth and exploration. I highly recommend Alisha for her diligence, aptitude, and passion for learning.

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