

Motasim

Linkedin: <https://www.linkedin.com/motasim/>

Github: <https://github.com/motasimmakki/>

Leetcode: <https://leetcode.com/motasimmakki/>

Email : makkimotasim@gmail.com

Mobile : +91 740-985-6583

RESEARCH INTEREST

Deep Learning, Computer Vision, Object Detection and Recognition, Segmentation, Model Optimization, Machine Learning, Artificial Intelligence, Neural Networks


EDUCATION

- Jamia Millia Islamia University** New Delhi, India
• *Master of Technology - Computer Engineering (AI & ML); CGPA: 9.83 (93.3%)* *August 2023 - June 2025*
Courses: Algorithm Design, Data Analytics, Soft Computing, Machine Learning, Intelligent Systems, Deep Learning, Image Processing.
- Hemvati Nandan Bhuguna Garhwal University** Srinagar, India
• *Bachelor of Technology - Computer Science & Engineering; CGPA: 8.16 (81.6%)* *December 2020 - July 2023*
Courses: Operating System, Graph Theory, Database Management System, Data Mining and Data Warehousing, Artificial Intelligence, Natural Language Processing.
- Jamia Millia Islamia University** New Delhi, India
• *Diploma in Computer Engineering; 88.54%* *August 2017 - October 2020*
Courses: Object Oriented Programming, Data Structures, Computer Networks, Computer Graphics, Software Engineering.



SKILLS SUMMARY

- **Languages:** Python, Java, C++, C, Javascript, SQL, Bash scripting, LaTeX
- **Frameworks:** TensorFlow, Keras, Pytorch, NLTK, OpenCV, Scikit-Learn, Pandas, NumPy, Matplotlib.
- **Tools:** Kaggle, Google Colab, Jupyter Notebook, Matlab, VSCode, Git & Github
- **Soft skills:** Teamwork, Communication, Literature Review, Report Writing, Data Analysis, Problem Solving

EXPERIENCE

- AI & ML Intern** New Delhi, India
• *UDAAN, Air Force Station, Rajokri - Wg Cdr Devesh Tripathi* *December 2024 - January 2025*
Vehicle Licence Plate Detection & Recognition using YOLO-v8 
 - Fine-tuned the **YOLO-v8** on the custom dataset with **24K+ samples** to detect the vehicle's licence plate and integrated **Paddle OCR** for recognition.
 - Developed the web-based solution using **Flask** for a seamless user experience that works on pre-recorded traffic clips and the live camera feed as well.
 - The recognized plates are efficiently tracked and stored in the **SQLite** database with export functionality to CSV for easy data management. [\[Link\]](#)
- Research Intern** New Delhi, India
• *Department of Computer Engineering, Jamia Millia Islamia - Dr. Sarfaraz Masood* *August 2024 - December 2024*
Cost-Effective Deep Learning Model for Crowd Density Detection (Currently Working):
 - Building a completely new model that requires fewer computations by reducing the number of trainable parameters needed to generate the density map.
 - Utilizing the first 12 blocks of the proposed **InceptionV3** model and replacing the conventional pooling layer with the **Spatial Pyramid Pooling** strategy, using pooling regions of sizes 1x1, 2x2, and 3x3.
 - Passing the extracted features into the **Contextual Module**, fusing these features, and then passing them through additional convolution layers to obtain the density map. [\[Link\]](#)

PROJECTS

- **Cloud-Enabled Violence Detection System** 
Developed a Multimedia Evidence Capture System using a Raspberry Pi camera module to automatically capture images and videos at accident scenes and securely store them on AWS S3. Designed and implemented deep learning models, including CNN and VGG16, to analyze video frames and accurately detect violence-related activities. Integrated cloud storage solutions to ensure secure and efficient data management. (Paper Under Writing) [\[Link\]](#)
- **Case Predictor Streamlit App** 
Developed an ensemble learning model combining LSTM, CNN, and GRU to predict total COVID-19 infections for the next 100 days based on 300 days of historical data. Conducted extensive model training and hyperparameter tuning to optimize accuracy and performance. Utilized data provided in the Golden Hack 3.0 problem statement to ensure accurate results. Designed a user-friendly interface allowing individuals to easily analyze and explore the predicted data.

ACHIEVEMENTS

- Secured a top rank of **1421 worldwide** and **354 in India** in the Google Hash Code 2022 competition, demonstrating advanced problem-solving skills and competitive programming prowess.
- Won the **Data Science challenge** at The Golden Hack 3.0, earning a **cash prize of \$250** for exceptional performance and innovative solutions, where we proposed an ensemble learning approach for predicting the infected cases from past data.
- Excelled as a contributor in the **Data Structures and Algorithms** domain during the Girlsript Winter of Contributing, highlighting strong technical expertise and collaboration.
- Selected to work as a **special paid contributor** at District Institute of Education & Training (DIET) - Pauri, to develop and edit the academic content during an *E-content editing workshop*.

POSITIONS OF RESPONSIBILITY

- **Class Representative, M.Tech - Computer Engg., JMI:** *September 2023 - Present*
Acted as a Class Representative of the Computer Engineering branch from 1st Semester. This work specifically involved being a moderator between the professors and the students. It involved scheduling, managing, and maintaining the class norms regarding all academic matters.
- **Teaching Assistant, STTP (AI & ML), JMI:** *July 2024*
Worked as a Teaching Assistant at the *Short Term Training Program (STTP)* on Artificial Intelligence and Machine Learning, organized by the Department of Computer Engineering at JMI from July 1st to July 19th. I had the privilege of assisting approximately 130 candidates, including industry employees, students from diverse backgrounds, and mathematical enthusiasts.
- **Delivered a Week-Long Workshop on Coding & AI, DIET, Pauri:** *February 2023*
Represented H.N.B. Garhwal University at District Institute Of Education & Training (DIET) - Pauri, and delivered a five-day long workshop program on the concepts of Artificial Intelligence and Coding. This engaging program, tailored for senior school teaching staff, was delivered in partnership with esteemed faculty members.
- **Student Placement Coordinator, M.Tech - Computer Engg., JMI:** *September 2024 - Present*
Facilitated and managed the placement process for students, coordinating with employers to secure job opportunities and ensuring effective communication between students and potential employers to achieve successful placement outcomes.

WORKSHOPS AND CERTIFICATIONS

- Built a *Face Recognition Application* using python as part of AI For India Event.
- Completed a certification in *Elements of AI* in association with the University of Helsinki.
- Attended National Seminar on *Intellectual Property Rights (IPR)* & its related Issues - Mizoram University and HNBGU
- *Data Structures and Algorithms* - Geek For Geeks

VOLUNTEER EXPERIENCE

- **Research Associate at E-CELL JMI** New Delhi, India
Conducted comprehensive research and compiled a detailed analysis of prominent startups like Bijnis, and Plum Goodness. *Jan 2022 - June 2022*
- **Subject Matter Expert at Chegg, India** Remote
Served as a Subject Matter Expert at Chegg India in the domain of Computer Science and assisted over 1.5K students in resolving their academic queries. *October 2020 - May 2022*
- **Campus Ambassador at Girlsript Winter of Contributing** Remote
Actively promoting coding events and assisting with workshop organization. *January 2021 - June 2021*
- **Member of All India Council for Technical Skill Development(AICTSD)** New Delhi, India
Contributed to a global initiative, focused on national-level leadership development and fostering academic-industry collaboration. *August 2021 - Present*