

Mragank Shekhar

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SUMMARY

CSE undergrad who's quite passionate about opensource development, AI/ML, and android-app development. I'm always looking for new ways to optimize existing solution.

EDUCATION

BENNETT UNIVERSITY

B.TECH IN COMPUTER SCIENCE
2021 (expected) | Greater Noida, UP
CGPA (till 5th semester): 7.69 / 10.0

COURSEWORK

UNDERGRADUATE

Data Structures and Algorithms
OOPs using JAVA
Operating Systems
Info. Management System
Software Engineering
Big Data Analytics
Cloud Computing
Machine Learning
Deep Learning
Linear Algebra
Discrete Mathematical Structures
Probability and Statistics
Numerical Methods

SKILLS

PROGRAMMING

Proficient in:
Java • Python • MySQL • Dart
Familiar with:
C • C++ • Matlab

TOOLS/LIBRARIES

Proficient in:
Android SDK • Flutter • OpenCV
NumPy • Pandas • TensorFlow
Familiar with:
REST API • AWS • Docker

PLATFORMS

Linux • Windows

LINKS

Github: [Mgeeeek](#)
LinkedIn: [Mgeeeek](#)
Org-Mail: ms8939@bennett.edu.in

EXPERIENCE

NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY

UNDERGRAD RESEARCHER

May 2019 - Jun. 2019 | Dwarka, New Delhi

- Worked on recent and legacy meta-heuristic optimization algorithms and studied the effects on the performance of the algorithms by using techniques like hybridization, chaotic maps and evolutionary operators.
- Analyzed the trade off between exploration and exploitation in different stages of the algorithms.
- Implemented and tested the algorithms in different optimization problems.

PROJECTS

SURVEILLANCE VIDEO SUMMARIZATION

MENTOR: DR. KK BISWAS | PROJECT TYPE: WEB APPLICATION

Aug. 2019 - Nov. 2019

- Developed a flask based web app which is used for surveillance purpose by tracking and recording all the important events within the video with interactive and searchable timeline for greater accessibility.
- Worked with OpenCV, which is used to extract and track foreground masks in the video by creating trajectory of each mask and finally merging the trajectory images with minimum overlap.
- Also embedded a 3D CNN model using TensorFlow to detect violence and physical harassment in the video.

HANDWRITTEN-DOCUMENT SCANNER

PROJECT TYPE: ANDROID APPLICATION

Feb. 2019 - May 2019

- Developed an Android app which is used to scan, recognize handwritten documents and preserve the formatting of the original document.
- The project heavily involved OpenCV for edge detection and segmentation of handwritten document and a TensorFlow lite formatted modified Fast RCNN model.

STUDY OF RECOMMENDER SYSTEMS

PROJECT TYPE: COMPARATIVE ANALYSIS

Aug. 2018 - Nov. 2018

- Implemented and analyzed the performance of SVD based matrix factorization, item-based and user-based collaborative filtering algorithm in an online environment.
- Improved the item-based kNN collaborative filtering model by embedding JAYA optimization algorithm which resulted in good scalability along with better recommendations.

PUBLICATIONS

- M.Shekhar, *Training Multi-Layer Perceptron Using Population Based Yin-Yang-pair Optimization*, presented in *The International Conference on Artificial Intelligence and Applications (ICAIA'2020)*, to appear in the Springer proc. *Advances in Intelligent Systems and Computing 2020*.
- M.Shekhar, *Feature selection using hybrid life choice-based optimizer*, submitted in *IEEE 5th International Conference on Computing, Communication and Automation (ICCCA'2020)*.