Mragank Shekhar

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SUMMARY

CSE undergrad who's quite passionate about open-source, android-app development and reinforcement learning.

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
Git • MongoDB • TensorFlow
Familiar with:
Spring boot • REST API • AWS • Docker

PLATFORMS
Linux • Windows

LINKS

Github: **MgeeeeK**
LinkedIn: **MgeeeeK**
Org-Mail: **ms8939@bennett.edu.in**

EXPERIENCE

GOOGLE SUMMER OF CODE 2020
NumFOCUS (sub-org: PySAL) - Developer
May 2020 - Present | Remote

- Added functionality to support raster data inside PySAL library, which earlier focused only on vector data. Created an interface for seamless conversion from raster data to the data that PySAL's statistical methods accepts.
- Used Dask and Numba to optimize computation of libpysal's methods while using raster file. Worked on making methods scale with large raster using Dask and adding lazy evaluation support to reduce the memory footprint of the computation.

NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY
Undergrad Researcher
May 2019 - Jun. 2019 | Dwarka, New Delhi

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

PROJECTS

SURVEILLANCE VIDEO SUMMARIZATION
Mentor: Prof. KK Biswas | Project Type: Web App
Aug. 2019 - Nov. 2019

- Developed a flask based web app used for tracking, classifying and recording the important events within surveillance video and managing summarized videos interactively.

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 while images and tables.

STUDY OF RECOMMENDER SYSTEMS
Project Type: Comparative Analysis
Aug. 2018 - Nov. 2018

- Analyzed the performance of SVD based matrix factorization, item-based and user-based collaborative filtering algorithm. Additionally, improved the item-based kNN collaborative filtering model by embedding GWO algorithm.

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)*.