

Mragank Shekhar

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EDUCATION

Bennett University

Bachelor of Technology in Computer Science and Engineering; GPA: 8.0 / 10.0

Delhi NCR, IN

2017 – 2021

EXPERIENCES

Google Summer of Code at NumFOCUS

Remote

Open-source Developer

May 2021 – Present

- Working with ArviZ community to extend Dask support inside ArviZ library
- Helping the library to scale on a single and distributed machines when using larger-than-memory datasets.

Amazon

Hyderabad, IN

Data Engineer Intern

Feb. 2021 – Present

- Working on automated dataset curation for Redshift.
- Implementing POC for pattern matching over historical query data to generate curated datasets.

Google Summer of Code at NumFOCUS

Remote

Open-source Developer

May 2020 – Aug. 2020

- Created an interface for seamless conversion of raster data to PySAL's spatial weights object.
- Rewrote the logic of the WSP builder and used Numba and joblib to achieve 3x speed up during conversion.
- Added support for plotting raster-based DataArray objects in the PySAL's sub-module called splot.
- Project link - Raster awareness in PySAL

Netaji Subhas University Of Technology

New Delhi, IN

Research Intern

May 2019 – Jun. 2019

- Analyzed exploration and exploitation behaviour in different stages of the optimization algorithms.
- Studied different techniques like hybridization, chaotic maps and evolutionary operators.
- Implemented several new algorithms in python and contributed to EvoloPy via Git.
- Published and presented the research findings in ICAIA'2020: Paper link

PROJECTS

Movie Recommender | Django, Elasticsearch, Vue.js, PostgreSQL, IMDb API

- Developed a web app to recommend movies to users using regularized kernel matrix factorization, and item-item-based collaborative filtering algorithms.

URL Shortner | Django, PostgreSQL, Vue.js

- Developed a web app to shorten the passed url using bit-shuffling approach to avoid collisions and generate non-consecutive shortened urls.

Evolutionary Stochastic Treasure Hunt | Godot, Pytorch

- Worked on a dynamic-difficulty-based procedural content generation framework using reinforcement learning.
- Used the framework to develop a 2d platformer videogame like super mario bros.

Surveillance Video Summarization | Flask, TensorFlow, OpenCV, MongoDB

- Developed a web app for tracking, classifying and recording the important events within surveillance video.

Handwritten-Document Scanner — Java, TensorFlow Lite, OpenCV, SQLite

- Developed an android app using java for scanning and recognizing handwriting in handwritten documents.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript

Database: MySQL, MongoDB, Neo4j

Frameworks: Flask, Node.js, Django, React.js, Vue.js

Developer Tools: Git, Docker, AWS, VS Code, IntelliJ, vim

PUBLICATION

- Shekhar M., *Training Multi-Layer Perceptron Using Population Based Yin-Yang-pair Optimization*, The International Conference on Artificial Intelligence and Applications (ICAIA'2020), *Advances in Intelligent Systems and Computing*, vol 1164. Springer, Singapore.