Aditi Juneja

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WORK EXPERIENCE

Independent Contractor - NumFOCUS (Scikit-image)

November 2024 - March 2025

Contributed towards incorporating an 'entry-point' based API dispatching mechanism in scikit-image. Experimented with different approaches; collected feedback from scikit-image and cuCIM developers to improve the machinery and the user-API; coordinated and collaborated with developers from various Scientific Python open-source projects; contributed towards supporting other general activities in scikit-image. Checkout the final report to know more!

Contributor - Google Summer of Code (NumFOCUS)

May 2024 - August 2024

Integrated NetworkX's and joblib's configuration systems into nx-parallel, switched the build tool from hatchling to setuptools, automated backend metadata updation through a pre-commit hook, improved and provided custom chunking capabilities for all existing algorithms. Beyond the proposed items, created a conda-forge feedstock for nx-parallel, started discussions on the future directions nx-parallel could go and accomplished various other enhancement and maintenance goals. (Final report and Bi-weekly blogs)

Independent Contractor - NumFOCUS (NetworkX)

Jan 2024 - Mar 2024

Developed on nx-parallel, a newly added parallel backend for NetworkX utilizing joblib to parallelize graph algorithms; set up the asv benchmarks; analyzed the effects of chunking on speedups; added 15 parallel graph algorithms; integrated the 'entry-point' that exports backend metadata to networkx. Know more!

Skills/Tools learned: Python (API dispatching, Python package management, joblib (parallel algos), NetworkX (graph algos), scikit-image (image analysis), pytest (testing)), ASV (for benchmarking), GitHub (CI/CD), maintaining large OSS and community.

ACTIVITIES AND VOLUNTEER ROLES

- Maintainer/Core Developer NetworkX, nx-parallel, Scientific Python
- Google Summer of Code 2025 Mentor (NumFOCUS NetworkX) [May 2025 Aug 2025] [Link]
- Presented talks, posters, sprints at EuroSciPy, SciPy US, PyCon India, PyData Global [Archive]
- All India Rank 686 (out of 39,210 candidates) in GATE(Data Science and AI) 2024
- Communities and conferences: SciPy India (organizer), SciPy 2025 (proceedings paper reviewer), IndiaFOSS 2025 ("FOSS in Science" devroom manager), DISC Unconference 2025, PyData Global 2024 and PyDelhi (talk proposal reviewer), PyCon US 2025 (proposal mentor)
- Expository writings Kruskal's algorithm-blog, Math food play, LCG and Randomness and more!
- NPTEL courses Deep Learning(Top 5%), Social Networks(Top 1%) (Certificates on LinkedIn)

Projects

E-commerce Website [Code]

A Flask-based e-commerce web app, featuring CRUD APIs, RBAC authentication. Features like order placement, inventory management, scheduled tasks (emailing reminders/reports), product recommendations, and other diverse functionalities for the 5 user types.

Tools/libraries used: Python, Flask, flask-restx, Docker, SQLite(RDBMS), sklearn, Celery, HTML, flask-mail, Github, shell scripting, Stripe (online payments API), Twilio (message sending API), Swagger

EDUCATION

University of Delhi

Bachelor of Science (Honors) Computer Science

2021 - 2024

Indian Institute of Technology, Madras(Remote)

Bachelor of Science in Data Science and Application

2021 - Present