

Aditi Juneja

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WORK EXPERIENCE

Independent Contractor - NumFOCUS (Scikit-image)

November 2024 - March 2025

Coordinated and collaborated with developers from various Scientific Python open-source projects to incorporate 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; contributed towards supporting other general activities in scikit-image. [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

- Maintainer/Core Developer - [NetworkX](#), [nx-parallel](#) (conda feedstocks of both packages) [Volunteer]
- Presented talks, posters, sprints at EuroSciPy, SciPy US, PyCon India, PyData Global 2024 [[Work](#)]
- Volunteer at PyData Global 2024, PyDelhi local chapter - proposal reviewer.
- All India Rank 686 (out of 39,210 candidates) in [GATE\(Data Science and AI\)](#) 2024
- 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