Priyanshu Agarwal

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EXPERIENCE & OPEN SOURCE

Machine Learning Engineer Intern   January 2023 − May 2023
DeepTuned AI Labs   *On-site*

- Developed a robust PDF library from scratch, extracting important information like positions and structures, enhancing the company's PDF data processing capabilities for seamless integration into projects.
- Created and maintained fast and efficient APIs using FastAPI, enabling seamless integration with various services and applications, ensuring high-performance data transfer and processing.
- Used MongoDB, Pinecone, and Elasticsearch to build a semantic search engine for research papers. This involved curating a core database of papers, indexing them, and developing algorithms for searching and retrieving papers.

Google Summer of Code Student Developer   May 2021 − August 2021
NumFOCUS   *Remote*

- Expedited battery model development by generating mathematical expressions from expression trees.
- Visualized PyBaMM's expression trees in LaTeX in order to study model equations.

PyBaMM   January 2021 − Present
Open Source   *Remote*

- Accelerated battery degradation simulations by allowing developers to batch multiple studies.
- Reduced dependency on an unstable third party library (jax and jaxlib).
- Increased the efficiency of the release pipeline by automating the entire versioning and release process on GitHub and PyPI.

EDUCATION

Symbiosis Institute of Technology, Pune   2019 − 2023
Bachelor of Technology in Mechanical Engineering   *Maharashtra, India*

TECHNICAL SKILLS

Languages:	Python, TypeScript, JavaScript, HTML, CSS
Platforms:	Linux, Google Cloud, DigitalOcean, AWS
Tools:	Nginx, Docker, Expo, Vite, GitHub Actions, JupyterLab, Git
Libraries/Frameworks:	React, React Native, MongoDB, Pinecone, Elasticsearch, FastAPI, Streamlit

PUBLICATIONS

liionpack: A Python package for simulating packs of batteries with PyBaMM

*T. G. Tranter, R. Timms, V. Sulzer, F. Brosa Planella, G. M. Wiggins, **P. Agarwal**, S. Chopra, S. Allu, P. Shearing, D. J. L. Brett, (2022), Journal of Open Source Software, 7(70), 4051.*

AWARDS & ACHIEVEMENTS

Awards:	Google Open Source Peer Bonus Award
Scholarships:	Linux Foundation Training (LiFT) Scholarship,
	KubeCon + CloudNativeCon North America 2021 Student Scholarship
Talks:	PyBaMM Workshop, PyBaMM Showcase/AMA

VOLUNTEER EXPERIENCE

- Mentored under Google Summer of Code for the benchmarks project with PyBaMM under NumFOCUS.
- Volunteered at info desk and hosted talks at Free and Open source Software Developers (FOSDEM) event.
- Mentored contributors and reviewed pull requests for the Kidney Exchange project as GirlScript Summer of Code Mentor.
- Hosted workshops and served as an ambassador for the Google initiative #IamRemarkable within my personal and professional networks.