

# ANKIT KHUSHWAHA

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## Education

Indian Institute Of Technology Dharwad

Bachelor of Science, Physics

Dec. 2022 – Present

Dharwad, Karnataka

## Technical Skills

**Languages:** C, Python, Bash, HTML, CSS

**Systems & Tools:** Linux, gdb, GNU Make, CMake, Git, GitHub, GitHub Actions, VS Code, Vim, SQLite, Postman, REST APIs

**Libraries & Frameworks:** NumPy, Pandas, scikit-learn, Flask, SQLAlchemy, Selenium, BeautifulSoup, Jinja

**Core Skills:** Debugging, Open Source Development, Machine Learning, Web Scraping, Automation, Dependency & Workflow Management, Scientific Computing

## Experience

Acadia Ventures

July 2025 – Present

Research and Development Intern

Remote

- Built a notification system in FastAPI using event triggers and async tasks, improving user engagement with timely alerts.
- Implemented secure JWT-based authentication with role-based (admin/user) access, strengthening API security and control.
- Refactored core backend codebase to improve maintainability, readability, and adherence to best practices.
- Developed structured backend tests with fixtures to manage inter-test dependencies, increasing reliability and reducing regressions (coverage expanding).
- Designed relational schemas and optimized queries in PostgreSQL, improving data consistency and API performance.

## Open-Source Contribution

SunPy

Solar Data Analysis Toolkit

- Added row/column slicing, time range truncation, and energy bin support to `sunpy.TimeSeries` #8184, #7922, #7943.
- Improved `TimeRange.shift()` and timestamp parsing, and fixed HTML rendering issue in `GenericTimeSeries` #7931, #7911, #7947.
- Improved performance of `CompositeMap` plotting and deprecated the `sunpy.physics` utilities #7948, #8039.
- Updated versions of packages and automated changelog extraction and release workflows using GitHub Actions package-template #181, package-template #184.

Stingray

Spectral Timing Analysis Toolkit

- Extended time-series modeling with a custom analysis pipeline and added Fermi GBM FITS support #889.
- Improved `EventList.read` and fixed `Lightcurve.shift` to ensure data consistency #894, #912.
- Redesigned documentation UI to fix sidebar scrolling and text-overflow issues #918.
- Collaborated with maintainers through GitHub PRs, issue discussions, and code reviews.

## Projects

Grocerystore Website | Python, Flask, Jinja, SQLite, SQLAlchemy



- Built a fully functional e-commerce web application with Flask, featuring product listings, cart operations, and a secure checkout system.
- Designed and implemented a user role-based access control system, reducing unauthorized access and improving admin oversight.
- Integrated SQLAlchemy ORM with SQLite to perform efficient database operations and ensure data persistence.

## Certifications

The Linux Foundation

Issued Aug 2025

LFD103: A Beginner's Guide to Linux Kernel Development

Credly