Asad Arshad

Astrophysicist & Programmer

About me

An inquisitive, ambitious and creative student, with a passion of learning, always seeking new ways to understand the cosmos, while experiencing and enjoying the world of science, research and technology, as well as have *fun*.

Personal

Gender: Male
Nationality: Pakistani
circa 2002 AD

Areas of specialization

- Astrophysics
- Scientific Research
- Exoplanetary Science
- GIS & Remote Sensing
- Programming
- Scientific & Fictional Writing

Interests

Reading, Writing, Programming, Cycling and Listening to the Music during all these.

Application Softwares

- Jupyter Notebooks
- Visual Studio Code
- FITS Liberator
- Microsoft Office
- ArcGIS Pro & Desktop
- QGIS
- Google Earth Engine & Google Earth Pro
- Stellarium

+92-349-4906282
def_fun
@c299792458_
asad.mail
My Portfolio

On Going Projects

2025–Pre **Down the Black Hole: A wobbly web experience**
Lead · HTML, CSS, JS
As for my Bachelors final year project, I along with a friend, are currently designing a webpage that will contain information, articles, current research, illustrations from across the web, links as well as basic help to navigate data regrading BHs from sources like NASA and the things we learn as we venture in this rabbit hole.

Degrees

2019–21 **Intermediate**
F. Sc (Pre Eng) [A+] ·
Govt. College Township

2021–25 **Bachelors**
Space Sciences [3.86] ·
Dept. of Space Science
University of The Punjab

Programming

- python
- javascript
- html, css
- LaTeX

(LaTeX compiled on January 5, 2025)

Past Work

2024 **Studying the effects of ENSO on Moonsoon in Pakistan**
Thought Leader · Google Earth Engine
Our aim was to use EE datasets to calculate **Oceanic Nino Index (ONI)** and **Standarized Precepitation Index (SPI)** to see how the rainfall in moonsoon season in Punjab, Pakistan is effected by El Nino and La Nina.

2024 **QSOs Spectra and Virial BH masses on SDSS**
Solo · SciServer
In this little side project, I explored the vast dataset on Spectra of QSOs through python as well as performed some stats on the BH mass dataset from **Vizier**.

2023 **Exoplanets around "TRAPPIST-1" through "KEPLER"**
Lead · FITS Liberator & MAST
Analysing the Light curves of "TRAPPIST-1" that we made using the "Transit data" from **Kepler Mission** and **K2** and studied the orientation and general planetary parametes of the planets in TRAPPIST system.

Positions Held

2024 Summer Internship at *PMD, HQ, Islamabad*
2024 Dr. Khalid's assistant in *SARNET* course

Programs

2024 *ONI using OISST v2.1 dataset*, Google Earth Engine.
2024 *Orbits & Keplerian Elements in Python*, Google Colab.

Languages

Urdu C2 mother tongue
English C2

Writings

Aug. 2021 "Would you like an Omelete?".