Asad Arshad

Astrophysicist, Geospatial Specialist & 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

On Going Projects

2025–Pre | **A Complete Bus Tracking System**
DEVELOPER · React Native, Next.JS, PostgreSQL 📍
The goal is to design a complete tracking system for buses comprising on a android mobile app on driver side leveraging local mobile gps module and a web App showing real time bus location, linked through a backend PostgreSQL database through BaaS like Supabase or Amazon RDS.

2025–Pre | **A Book-keeping Web-Desktop Application**
DEVELOPER · Python, SQL, HTML, CSS, JS 📍
An Application using SQL database to keep employee records, accounts and authentication, Python for backend procedure, HTML, CSS and JS for user interface, in a local Desktop App, bind using eel library

Past Work

2025 | **L'appel au Vide: Light Signals around SMBH**
LEAD · HTML, CSS, JS, Github 📍
As for my Bachelors final year project, we investigated what happens to light Signals in the vicinity of SMBHs and what would a conversation be like using such light signals in morse code and developed a webite Call-to-the-void

2024 | **Guessing the Countries: A WebGIS Game**
SOLO · Github 📍
A simple yet quite fun game, whose objective is right in the name, guessing the names of the countries and get fun surpised gif reactions.

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.

and more on next page

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?".

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