







Mr.

ASAD ARSHAD

Astrophysicist, Geospatial Specialist & Programmer

Facts

personal

 Asad Arshad
 nationality: Pakistani
 2002
 Lahore, Pakistan

Skills

Learning
Programming
Writing

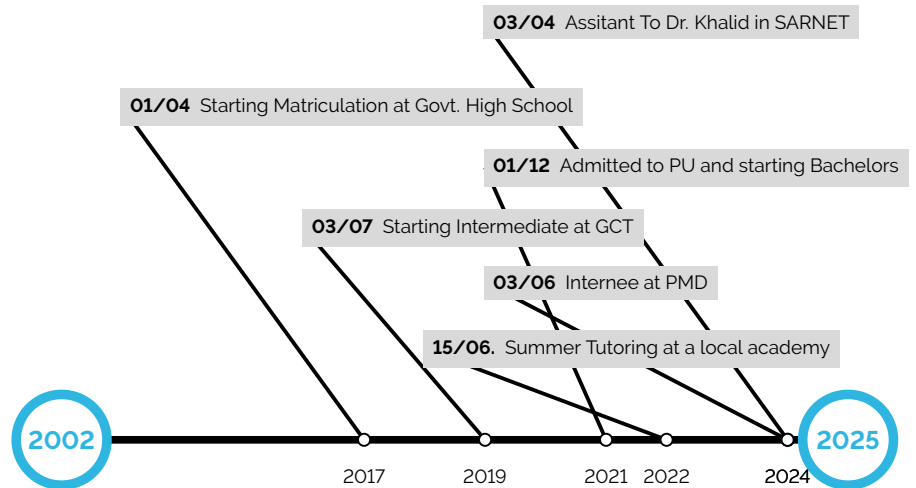


Interests









OS:  

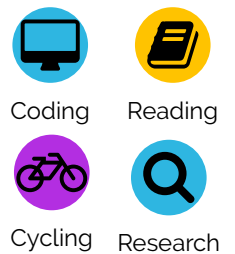
IT & programming



DEGREES

2025	Bachelors BS SPACE SCIENCE · PU 	
2021	Intermediate FSC. PRE ENG · GCT, Lhr 	
2019	Matriculation HSc · Govt. High School, Lahore 	

HOBBIES

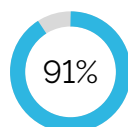


CERTIFICATES & GRANTS

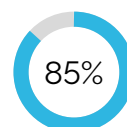
2025	Honhaar Scholarship
2024	Astronomy Quiz at University
2024	Summer Internee at PMD

WRITINGS

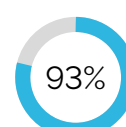
Aug. 2021	"Would you like an Omelette?"
Oct. 2024	"ONI & SPI correlation in Pakistan", in: <i>Class</i> .



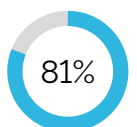
Python



Javascript



ArcGIS Pro



LaTeX

LaTeX compiled on June 3, 2025

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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 website 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 surprised 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 **Standardized 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

English

C2

mother tongue

C2



WRITINGS

Aug. 2021

"Would you like an
Omelete?".

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SOFTWARES



PAST WORK [CONT...]

- 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 parameters of the planets in TRAPPIST system.
- 2023

Satellite Orbits and Ground Track using "Keplerian Elements"
SOLO · Python & VS code

We used the keplerian elements information on Satellites like Landsat and wrote a python script that calculated the path of satellite and animated the plot as well as its ground track on a longitude and latitude axes with labels.
- 2023

Roulettes: Animating mathematical curves using p5js
SOLO · p5js & p5.js Web editor

Utilizing the potential of p5.js, we had fun creating and animating roulette, from differential geometry of curves, and both learned js and recreated shapes like cycloids, epicycloids, heart curves and a lot more.
- 2022

Earth is Flat. Dont you Know?
SCRIPT WRITER · MS Word

A documentary into the stories about the very shape of our own planet, made with classmates, exploring how the earth was once viewed and still is by some people on this round round planet.
- 2022

Trigonometric functions estimation without 3rd party libraries
SOLO · Python & VS code

As an experiment in mathematics and programming, we use maths functions to calculate Trigonometric functions on our own and compared the result with values from libraries like **Numpy** and **math**.

and many many more. (For them, check my Portfolio)

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Lahore, Pakistan

My Portfolio