

# Meesum Ali Qazalbash

CS Junior at Habib University

Mathematics & Competitive Programming Enthusiast

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 Qazalbash

## EXPERIENCE

### HABIB UNIVERSITY

TEACHER ASSISTANT

Aug 2021 - Present | Karachi, Pak

- Teaching Assistant for courses Programming Fundamentals, Data Structures and Algorithms, Object Oriented Programming, Calculus I and Engineering Mathematics.
- My responsibilities include checking assignments, and assisting in labs.

COFOUNDER & LEAD OF HABIB MATHS CLUB

Aug 2021 - Present | Karachi, Pak

- I along with my team arranged independent study groups for Abstract Algebra, Number Theory and Topology.
- We also arranged a competition for secondary school and high school students named as Mathema.

### SUMMER TEHQIQ RESEARCH PROGRAM

UNDERGRADUATE RESEARCHER

Jun 2022 - Aug 2022 | Karachi, Pak

- Worked on a research project to emulate the working of graphical pipeline in a CPU.
- The project was aimed to promote the hands on experience of students in the field of Computer Graphics. Later the same project worked as the prototype for the pipeline students were supposed to implement in their course project.

## EDUCATION

### HABIB UNIVERSITY BSC IN COMPUTER SCIENCE & MATHEMATICS

Aug 2020 - Jul 2024 | Karachi, Pak

- List of all courses taken is available on LinkedIn.
- CGPA: 3.8/4.0
- Dean's List: Fall 2022.

### ADAMJEE GOVERNMENT SCIENCE COLLEGE INTERMEDIATE

PRE-ENGINEERING

Aug 2018 - Jun 2020 | Karachi, Pak

- Secured A1 Grade (Overall 91%) in HSSC.
- 7th position citywide.

## SKILLS

### TOOLS & SOFTWARES

Linux (Proficient with Archlinux, Ubuntu), Git Versioning Tool (Proficient), Jupyter Notebook (Proficient), L<sup>A</sup>T<sub>E</sub>X(Proficient), Markdown (Proficient), Plotly (Intermediate), Dash (Intermediate), HTML(Basic)

### PROGRAMMING LANGUAGES

Python (Expert), C/C++ (Expert), C-OpenCL (Expert), CUDA-C (Intermediate), JavaScript (Basic), Julia (Basic)

## CONTENT WRITING

I have been writing social and tech related blogs for past two years. You can find my work on Medium.

## COMPETITIVE PROGRAMMING

I have been doing Competitive Programming for more than two years.

### LEETCODE - PROFILE (MAQ2628)

#### ICPC Asia Regionals 2023

My team has been qualified for the Regional round, we are unable to attend to the event due to fiscal constraints.

#### ICPC Asia Regionals 2022

Secured 19th position nationwide, solved 4/7 questions.

## PORTFOLIO

### RAYTRACER

A Raytracer written in **C++** which can render 3D scenes with spheres, triangles, and planes.

### CHECKERS WITH AI

A Checkers game developed in **Python3** with an AI that uses greedy algorithm to play.

### FLIGHT SIMULATOR IN WEBGL

A Flight Simulator written in **WebGL** which can render 3D scenes with planes, mountains, and clouds.

### INTERACTIVE JULIA SET IN WEBGL

An Interactive Julia Set written in **WebGL** which can render Julia Sets with different parameters.

### EMULATED GRAPHICAL PIPELINE

An Emulated Graphical Pipeline written in **Python3** which can render basic scenes with spheres, triangles, and planes.

### WORDLE ASSISTANT

A Wordle Assistant written in **C++** that helps in solving Wordle puzzles by using inferencing and backtracking.

### DASH APP FOR DATA VISUALIZATION

A Dash App written in **Python3** that visualizes geological data from a CSV file.

## AWARDS

- Dean's List for Fall 2022.
- Merit based 100% scholarship under the name of Talent Outreach Promotion & Support Program by Habib University.