

# Mustafa Sohail

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## Academic Qualification

**Undergraduate, Habib University University**

**2020 - Present**

- Computer Engineering Major
- HU-TOPS Scholar (100% Scholarship)

**Intermediate, Aga Khan Higher Secondary School**

**2018 - 2020**

- Distinction Award for Highest Score in Mathematics

## Work Experience

**XovoTech**

**Jun 2023 - Dec 2023**

**Junior React Developer**

- Contributed significantly to the development and deployment of 3 dynamic React projects, successfully bringing them to live production.
- Collaborated closely with stakeholders in a team of 6 people to gather project requirements, ensuring understanding of their needs and delivering tailored solutions.
- Drove a versatile project involving the creation of multiple design and functionality variants for a single website while implementing responsive design principles.

**Habib University**

**Undergraduate Researcher**

**Jun 2022 - Aug 2022**

- Collaborated and assisted professors with their research on integrating renewable energy for a flowmeter device.
- Conducted extensive literature review surrounding our research topic, presented various concepts extracted from these academic papers.
- Developed Simulation Models on Simulink and performed data analysis using MATLAB.
- Analyzed and Compared simulation and experimental results to evaluate the feasibility of implementing the project.

**Teaching Assistant**

**Aug 2021 - Dec 2021**

- Aided the professor in organizing classes for a cohort of 30 students for Programming Fundamentals course.
- Organized weekly tutoring sessions to clarify student queries and help them with their projects.

## Academic Projects

**Ray Tracing Engine**

- Raytracing engine designed in C++ for Computer Graphics.
- Includes rendering scenes consisting of different primitives, materials, light sources and camera angles.
- Sampling techniques and acceleration structures used to enhance rendered image and processing time respectively.

**Single Cycle Processor**

- Written and tested in verilog HDL for Computer Architecture.
- Modular components designed according to the RISC-V Architecture.

**Flight Simulator**

- Flight Simulator designed with a few controls (roll, pitch, yaw) and a basic environment written using WebGL.
- Dynamic Terrain with different viewing models and shaders rendered using rasterisation.

## Extra-Curricular Activities

- Member of Habib University Cricket Team '23-24
- Vice President, Gaming Club '22-23
- Deputy Director, Finance, HUMUN IV '22
- PIAIC (Presidential Initiative for Artificial Intelligence & Computing) Student for 4 quarters in 'Blockchain' and '4th Industrial Revolution' courses.
- Attended and Participated in IBA Leadership Conference '19
- Captained the college team to win a competition at GIKI Math Olympiad '18.

## ADDITIONAL

- Certifications: Blockchain Specialization, University at Buffalo.
- Technical Skills: Python, C/C++, C#, JavaScript, MERN Stack, Solidity, Verilog HDL, MATLAB & Simulink, LaTeX.
- Language Skills: Fluent in English & Urdu (Native)
- Volunteer work: Campus Blood Drive, Habib University Bazm e Aqeedat Conference '20.