

# TAUFIQUL ALAM

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## INTRODUCTION

A firm believer in the life-long pursuit of learning. Good at adapting and changing to become the best at whatever the task at hand is.

An expert in various powerful programming languages, with an in-depth knowledge of mathematics, Game Engines, 3D Graphics, GPU, and Desktop Hardware Programming.

With a keen interest in Video Games, Multimedia, and Interactive media development and research.

## EDUCATION

**Bachelor of Computer Science and Engineering**, Islamic University of Technology, Dhaka 2023  
CGPA: 3.68 / 4.00

## SKILLS

<b>Programming Languages</b>	C, C++, C#, GLSL, HLSL, CG, Java, Python, Javascript, Rust, Dart
<b>Frameworks/Libraries/APIs</b>	CUDA, CUDNN, Qt(5/6), Dear ImGui, OpenGL, SDL, SFML, Spring Boot, Android (Java/Native), OpenGL ES, WebGL, Flutter, PyTorch, SciKitLearn, TensorFlow
<b>Game Engines</b>	Unity, Godot, Unreal Engine
<b>Databases</b>	MySQL, PostgreSQL, Firebase, MongoDB
<b>Tools</b>	CMake, Blender, Aseprite, LMMS, Gimp, Inkscape
<b>Operating Systems</b>	Windows, Linux(Debian,Arch)
<b>Soft Skills</b>	Experienced in Small Team Work Environments, Project Management, Agile Teams
<b>Languages</b>	English, Bengali, Hindi

## EXPERIENCE

**Software Development Engineer - Graphics (Remote) (Full-time)** Dec 2023 - Present  
[Snaptrude](#) *New York, USA*

- Part of the Software Development - Graphics team working on the Architectural, Engineering, and Construction(AEC) automation software product known as [Snaptrude](#)
- Regularly working with a software stack of about 27 different technologies in total.

**Junior Unity Developer (Contract Remote) Full-time** Jun 2023 - Dec 2023  
[Viga Entertainment Technology](#) *Bengaluru, Karnataka, India*

- Worked on a Unity WebGL-based real-time metaverse project development and optimization, reducing loading times by 80%.
- Implemented Unity C# and Javascript/WebGL interactions making 2 different templates for supporting more than 5 platforms.
- Created a real-time video-texture streaming system from VideoJS to support video playback of 20 different formats inside of Unity WebGL.

## Graphics Engineer Intern (C++/Qt/Unity) (Remote)

Viga Entertainment Technology

Jan 2022 - Jun 2022

Bengaluru, Karnataka, India

- Performed general bug fixing code-cleanup, and development for a project in C++/Qt consisting of more than 30 thousand lines.
- Developed a streaming asset management system for Unity/WebGL project, reducing loading times by more than 50%.

## Upwork Contractor (Part-time) \*Top-rated\*

[Upwork Profile](#)

Jun 2022 - Present

- Did a lot of related to C++, OpenGL, SDL, Shaders and Unity(C#) with a 100% job success score and an average 5-star feedback, earning top-rated status.
- Handled communication and delivery of projects with more than 10 clients from diverse backgrounds and motivations.

## PROJECTS

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### BlazeTracer - C++

* Implemented path tracing renderer with the help of "Ray tracing in A Weekend Book" Series * Followed the tutorial and used my own knowledge of C++ multi-threading to optimize efficiency.	<a href="#">[ GitHub ]</a> <a href="#">[ Book ]</a>
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### Blaze Renderer - C++/ OpenGL

* Designed the architecture for a basic real-time 3D application for Desktop/OpenGL platform * Applied knowledge of GLSL, Modern OpenGL, Shading pipelines, basic lighting and shading techniques	<a href="#">[ GitHub ]</a> <a href="#">[ Resource ]</a>
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### Chip 8 Emulator - C++/SDL

* Implemented an emulation of virtual hardware instruction set for the Chip-8 system * Used SDL2 to display graphics and play audio	<a href="#">[ GitHub ]</a> <a href="#">[ Resource ]</a>
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### Game Of Life - C/C++/ OpenGL

* Developed implementations and visualization of Conway's Game of Life, Basic Sand, and Water finite automata. * Used OpenGL and GLFW to render the automata systems. * Used as a tool to study during Academic Course CSE-4703 (Theory of Computation) (IUT)	<a href="#">[ GitHub ]</a> <a href="#">[ Resource ]</a>
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### Bonk-Em-Good - Unity / C#

* Won 1 <sup>st</sup> place in the jam * Created a game with 3D arcade style, beat-em-up with a unique twist	<a href="#">[ GitHub ]</a> <a href="#">[ Itch ]</a>
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### Light's End - Unity / C#

* Designed the art, VFX, and Music all from scratch * Submitted for Lab project CSE-4552 (Computer Graphics & Multimedia Systems) (IUT)	<a href="#">[ GitHub ]</a>
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## EXTRA-CURRICULAR ACTIVITIES

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- Designed, Edited, and Published 2 magazines as the Vice President of ICT & Graphics, NDC English Club