

Abdullah Sajid

Computer Engineering Student @ University of Waterloo, ON, Canada

**This resume is for personal use only. It serves as a repository for different variations that I may adapt depending on the role I am applying for.*

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Education

University of Waterloo, ON, Canada

Honours Computer Engineering Co-op (Bachelor of Applied Sciences in Engineering)

Sep 2023 – Present

Relevant Courses: (Add one line of courses)

Technical Skills

Programming Languages: C/C++, C#, Python, OSL/GLSL, VHDL/Verilog, RISC-V Assembly (RV32IMAC), TypeScript, CSS

Tools & Software: Blender, Unreal Engine 4/5, Unity, VSCode, Visual Studio, Spline, Intel Quartus Prime Suite, Proteus Suite

Certifications: Microsoft Azure AZ-900, Microsoft Azure AI-900, WHMIS 2015

Professional Experience

Software Engineer Intern

Senarios Co. Draper, Utah, USA (Remote) | May 2025 – Aug 2025

- ❖ Built a scalable backend using **FastAPI** to power a **team management interface** for organizations.
- ❖ Maintained a **PostgreSQL database** with **SQLAlchemy ORM** to model a complex relational schema between **teams, users, documents, and permissions**.
- ❖ Developed a **Retrieval-Augmented Generation (RAG)** chatbot using **LangChain** and **PGVector**, implementing **role-based access control** for personalized and contextual document assistance.

Software Developer Intern

Techlogix Pvt. Limited, Lahore, Pakistan | Sep 2024 – Dec 2024

- ❖ Developed Web Applications using an **ASP.NET Core MVC + Angular stack**.
- ❖ Leveraged **REST APIs**, **YARP API Gateways**, and **RabbitMQ** for asynchronous inter-service communication.
- ❖ Managed version control with **Bitbucket** and coordinated **feature requests** using **Jira**.
- ❖ Evaluated upcoming **.NET 9.0** framework features and discussed **migration strategies** with the team.

Waterloo Experience (WE) Accelerate

University of Waterloo, Canada | Feb 2024 – Apr 2024

- ❖ Proposed **"Adaptibuild,"** an AI-powered accessibility suggestion tool leveraging **Microsoft Azure AI** to identify design patterns and enhance **architectural inclusivity**.
- ❖ Collaborated with peers to remotely to **conduct research, draft a pipeline, and present** a feasible concept to collaborators from **Avanade Inc.**
- ❖ Demonstrated **Computer vision's** efficacy in analyzing building blueprints using **weighted value parameters**.

3D Artist Intern

Game District, Lahore, Pakistan | Aug 2023

- ❖ Designed **characters from scratch** in Blender with **dynamic topology**, then manually **re-topologized** them for optimal animation-ready edge flow.
- ❖ Engineered **animation rigs** with **dual quaternion skinning** to imitate natural joints, **used IK controls and drivers** to streamline pose manipulation.
- ❖ Recreated **stylized renders** using existing reference images to demonstrate **adaptability of style and observational prowess**.

Game Designer

The Gamestorm Studios, Lahore, Pakistan | Jul 2022 – Aug 2022

- ❖ Created a **game environment using Blender** and optimized it for **mobile platforms on Unity 3D**.
 - ❖ Optimized high resolution assets by **reducing polygon counts** and **condensing UV maps** for extraneous meshes.
 - ❖ Leveraged **ASTC texture compression** to reduce draw calls and **streamline performance and memory**.
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Additional Experience

Freelance 3D Artist

Wirestock.io | Sept 2024 – Aug 2024

- Created **various 3D projects** with variations as per clients' needs.
- **Kitbashed existing 3D models** from old projects to **optimize for time constraints**.
- Communicated with clients to ensure customer satisfaction using snapshots before transacting.

Relevant University Projects

Ultrasonic Walking Stick (STM 32 Nucleo MCU) – Project Studio | Sept 2023 – Dec 2023

- Created a walking stick with **collision detection** and **sensory feedback** for visually impaired individuals.
- Programmed an **STM32 microcontroller** via **STM32CubeIDE** and tested the **peripheral communication through PuTTY** to ensure stable data transfers.
- Used an **HC-SR04 ultrasonic sensor** to detect objects with **vibration motors** to provide haptic feedback.

- Assembled the stick with a **PVC pipe** and **3D printed support brackets** to create a working prototype for demonstration.

Research Work: Technical Writing Report: Anti-consumerism in Fitbit Devices | Sept 2023 – Dec 2023

- Collaborated with a group of students to **find specific cases of unethical practices** by manufacturers in **Big Tech**.
- **Collected and researched** a list of reports from **peer reviewed journals** and **pro-consumerist agencies**.
- Assembled a deep-dive technical report on **device vulnerabilities**, including **intentional defects** in FitBit devices.
- Presented report contents in an interactive session by incorporating **UI design knowledge and 3D models**.

Personal Experience

- **3D Modelling:** Used **Blender** and **Unreal Engine** to articulate multiple 3D environments and models over the years: Hard Surface Models | Vehicle Design | Character Design (with stylization) | Rigging and Animation | Procedural/Parametric Modelling | Shaders and Rendering | Environment Design
- **Game Design:** Made small prototype environments in **Unreal Engine 4/5** with custom actor scripts, game mechanics, and interactive environments: Blueprints and Interfaces | C++ Classes for Actors | AI Behavior Trees and Navmeshes | Control Rigging and Physics | Level Design
- **Illustration:** Researched and refined my intrinsic art capabilities by **working with references** and learning **core design principles**. Used a multidisciplinary approach to create a comprehensive comic series using Blender's Grease Pencil, combining drawing mechanics with a compelling narrative: Sketching and Line Art | Perspective Drawings and Architecture | Concept Art | 2D Character Illustrations | Dynamic Posing
- **Teaching:** Independently **coached O/A level students** online in math related courses to help them achieve A/A*s. **Provided additional math assistance anonymously** on platforms like discord.
My current domain: GCSE Mathematics and Additional Mathematics | A Level Mathematics and Further Mathematics (Pure Only) | Calculus (Any) | Linear Algebra | Differential Equations

Honours & Awards

- **President's Scholarship (2023)** – University of Waterloo
 - **College Academic Blazer (2021)** – Aitchison College
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Leadership Experience

Head of Event – ACTECH | 2023

- **Organized and led a team of 40+ students** to host an online high school event.
- **Managed a \$1,000 budget** with the finance team to ensure effective resource allocation.
- Worked with the creativity team to create **promotional material and custom 3D-printed motifs** for the event.
- Event featured activities to foster learning and awareness among high school students in 6 distinct categories: Computer Science Trivia | Game Development | Web Design | AI/ML | Programming | Gaming.