KEERTHIVASAN

Portfolio: https://dev.kkvasan.ca/
Mobile: +1 (226)977-6398
London, ON Canada

Preferred Name: Keerthi

I am passionate about web design and development, specializing in creating innovative user experiences. With a background in programming and designing websites, applications and also games, I am a fast learner with a strong work ethic. I am seeking a challenging entry-level role where I can develop my skills while working alongside industry veterans.

WORK EXPERIENCE

Research Assistant – Materia Bioworks, Fanshawe College (August – November 2024).

- Developed a web scraper to collect data automatically.
- Researched bio polymers to develop new AI training methods.
- Employed machine learning techniques to study how different material properties interact and combine.
- Managed git workflow
- Wrote a combined a research document and a detailed report outlining findings on machine learning applications in material science, covering data analysis, model performance, and key insights.
- Tested out different type of training methods with data

Research Assistant – Haply Robotics, Fanshawe College (August – December 2024)

- Integrated **CHAI 3D** with the **Unity** engine to develop haptic feedback systems.
- Worked on creating environments that use multiple physics engines to improve simulation effectiveness.
- Used an intermediate CHAI 3D repository to bridge C++ and C#, enabling integration of CHAI 3D with Unity.
- Worked with a complex GitHub repository containing multiple C++ projects and parsers to facilitate cross-language communication between C# and C++.
- Wrote bridging code to enable Unity to send and receive real-time haptic data from CHAI 3D using interop techniques.
- Developed Unity scripts and native plugins that allowed CHAI 3D to send force feedback responses back into the Unity runtime.

PERSONAL PROJECTS

Development Portfolio Website

- Full-stack portfolio site built using React, JavaScript, and Node.js
- Backend supports full read/write operations to a connected database
- Features a clean, responsive design for showcasing development work
- Secured with route protection and form validation to ensure safe data entry

Check out the full working demo – dev.kkvasan.ca

Blog Website

- Built with **TypeScript** and **Firebase**, including both **frontend** and **backend** logic
- Includes a **rich text editor**, embedded image support, and formatting tools
- Integrated with **Firestore** for secure content storage and structured post collections
- Optimized for search engines with **SEO-friendly meta tags** and **sitemap generation**
- Allows registered users to sign in, create, and edit blog posts in real time

Check out the full working demo – blog.kkvasan.ca

VFX & Editing Portfolio Website

- Developed using **React**, **Firebase**, and **Material UI** to display film and editing work
- Features **authentication** for secure admin access to add and edit project entries

- Supports **video embedding**, project descriptions, and category-based layout
- **Backend supports real-time read/write to Firestore for dynamic updates**
- Fully responsive design with a modern, minimal interface

Check out the full working demo – film.kkvasan.ca

Custom Game Engine (OpenGL)

- Built from scratch using **OpenGL** as part of coursework at **Fanshawe College**
- Designed a full **graphics pipeline** with support for **textures**, **lighting**, and **shadows**
- Added support for **custom shaders** and **basic animation handling**
- **Implemented a simple physics engine with collision detection and movement logic**
- Gained experience working directly with vertex/fragment shaders and GPU-based rendering
- Created reusable components for rendering, input, and object updates

Check out the full working demo – Game Engine

Explore More Projects

Check out my main portfolio to explore more of my projects and ongoing work!

You'll find additional projects that showcase:

- Custom **physics programming**, including simulations and collision systems
- Advanced **graphics programming** using OpenGL and GLSL
- Freelance and client work for **portfolio websites**, including fully responsive designs with authentication, admin dashboards, and database integration

SKILLS

- Proficient in object-oriented programming (**OOP**) and programming logic
- Skilled in **Python**, **JavaScript**, and **C++**
- Experienced in designing with **CSS** frameworks like Material UI, Tailwind, and vanilla CSS
- Quick to adapt to new workflows and environments
- Familiar with **REST APIs** and full-stack development workflows
- Proficient in project management tools, including **Excel** and **Word**
- Strong ability to create reports and meet deadlines
- Experienced in using **Slack** for team collaboration
- Knowledgeable in Git workflow and version control
- Skilled in integrating backend databases with tools like Firebase
- Capable of building websites using WordPress and other website builders
- Experienced in designing website layouts with Illustrator and Figma
- Comfortable working in remote environments

EDUCATION

- **Visual Effects and Editing for Contemporary Media (2024-2025) –** Fanshawe College, London, ON Canada
- **Game Development – Advance Programming (2023-2024) –** Fanshawe College, Downtown London, ON Canada
- **MCA (2020-2022) –** College OF Engineering Guindy, Anna University, Chennai, India
- **B. Com (2017-2020)–** Ramakrishna Mission Vivekananda College, Chennai, India