

Fatema Husain

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EDUCATION

University of Waterloo

Bachelor's in Honours Mathematics

2022 - 2027

President's Scholarship of Distinction

TECHNICAL SKILLS

Languages: C++, Objective-C, Python, Javascript, HTML, SCSS, React.js, MongoDB, Express.js, Node.js

Tools: SDL2, Godot, Linux OS/Unix Shell Scripting, CMake, Bash, Git, Visual Studio Code, Figma, Adobe Photoshop,

Raylib **CourseWork:** Object-Oriented Programming (C++), Linear Algebra, Multivariable Calculus

PROJECTS

AI Chess Game | C++, XQuartz

November 2023

- Developed a console-based and graphical interface chess game from scratch by employing software development and OOP design choices to enhance scalability and modularity
- Integrated three difficulty levels of computer player intelligence, each employing unique algorithms
- Conducted rigorous unit and integrative testing to resolve complex bugs ensuring a smooth game experience
- Utilized git to manage codebase changes, allowing for collaboration and maintaining project integrity

Jarvis Desktop Assistant | Python, Pyttsx, SpeechRecognition

August 2022

- Built a functional desktop assistant capable of performing various tasks including opening websites, providing real-time information and responding to user queries
- Successfully implemented speech recognition and text-to-speech functionality using various Python libraries, allowing users to interact using natural language commands

2D Platformer Game | Godot

January 2024

- Designed and implemented a 2D platformer game featuring 3 levels and world map for player to navigate, using Godot engine
- Implemented key game functionalities including player health system, checkpoints, enemy attacks and moving platforms for an interactive user experience

2D PingPong | C, Raylib

January 2024

- Utilized the Raylib game development library for efficient graphics rendering and input handling
- Implemented simple AI computer player ensuring proper collision detection

Sudoku | Javascript, HTML/SCSS

Decemeber 2023

- Designed and developed a simple interactive web-based Sudoku game using HTML, CSS, and JavaScript to explore web development
- Implemented game logic using JavaScript, allowing users to receive feedback and change levels of difficulty

EXPERIENCE

Product Analyst Intern | KoStudio

February 2021 - August 2021

- Conducted research and competitive market analysis to identify market trends and opportunities for product improvement and reported insights to founder
- Understood product requirements to collaborate in product design prototyping using Figma and Photoshop
- Built a consistent and organized CRM database to recruit and manage 100+ brand ambassadors, leading to increased brand visibility
- Wrote SEO optimized product copy, drawing in organic site traffic from search engines leading to increased sales

Mathematics Tutor | L2L Certified

September 2019 - August 2021

- Assisted students in understanding mathematical concepts and taught effective problem solving strategies
- Utilized real-world examples to simplify abstract concepts with practical applications
- Actively collected student feedback and improved tutoring practices by enhancing personalized lesson plans for each student, increasing overall averages by 10 - 20%