

Sukhraj Purewal

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EDUCATION

Simon Fraser University

Bachelor of Science in Computer Science

Relevant Coursework: Intro to Software Engineering, Web-Development and Data Structures and Algorithms Analysis

Burnaby, B.C.

2021 - 2025

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Java, JavaScript, Typescript

Web Development: Angular, NEXT.JS, React, Node.js, Express JS, Google Cloud, Azure, ASP.NET Core

Databases: SQL, PostgreSQL, MongoDB

Technologies/Developer Tools: Git, GitHub, Docker, Linux, NumPy, TensorFlow, Keras

PROJECTS

StudyBuddy | *React, Express JS, MongoDB, Apache, Google Maps API*

Mar. 2023

- Created a student-focused web app for studying and peer connections.
- Constructed an Express JS server with a React front-end and MongoDB storage for login/sign up, chat, and user management.
- Enabled real-time communication between users with chat rooms and account creation.
- Implemented web socket feature for updating meeting locations and times in real-time.
- Utilized Google Maps API to display an interactive map showcasing nearby users.

AI Discord Bot | *Python, Discord API, PyQt5, multiprocessing/threading application*

Jan. 2023

- Developed a multifunctional Discord bot using APIs and libraries for weather, stocks, chess, and math.
- Utilized OpenAI, Stockfish engine, Weather/Stock APIs, and SymPy library in Python for the bot's development.
- Integrated PyQt5 framework with Discord API to enable viewing of current chess game status on Discord.
- Optimized bot performance by implementing multiprocessing and threading to handle multiple user requests efficiently.

Knight run | *Java, Maven, OOP, Software Design Patterns*

Oct. 2022

- Designed a challenging maze-solving game featuring dynamic obstacles and enemies.
- Implemented Factory method design pattern for creating game components, including enemies, main player, and maze walls.
- Utilized Java libraries like java.awt and javax.swing to develop the game's UI and implement collision detection and movement logic.
- Created a custom-made design pattern to program enemy movement behaviour while chasing the player knight through the maze.

Finder | *Angular, TypeScript, CSS, HTML, Git*

Oct. 2022

- Created a web app for users to report lost items and receive help from the community in locating them.
- Allowed users to log on found items and view items logged on by others as missing
- Incorporated the Mapbox API to show an interactive map with markers displaying the details of found items and their locations.
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

VOLUNTEER EXPERIENCE

Robotics club

Sept 2017 – June 2020

CAD designer

Enver Creek Secondary School, Surrey. BC

- Won Design Award at the VEX Robotics Provincial Championship, and qualified for Vex World Robotics Competition.
- Designed CAD models of structurally sound robots, taking into account usability and efficiency.
- Overcoming code malfunctions and broken parts during competitions by working efficiently as a team.
- I was also responsible for creating a collaborative working environment with the use of GitHub