Sangay Tenzin

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Education

College of Science and Technology — Royal University of Bhutan
BE in Software Engineering — Expected Graduation: July 2028

Yangchenphu Higher Secondary School — Yangchen Lam, Thimphu
Graduated Year: 2022

Projects

AllRecipes Clone – Full Stack Web Application:

As part of a group project, I contributed to building a full-stack clone of the AllRecipes website, handling both frontend and backend development. I helped design and implement user-friendly interfaces using HTML, CSS, and JavaScript, and developed backend functionalities such as user authentication, recipe management, and data storage using Node.js, and Express.js. The project was managed collaboratively using Git for version control and team coordination.

Plant Species Identifier – AI Model for CST Campus Plants:

Solely developed an AI-based plant species identification system focused on classifying plants found on the CST college campus. Collected custom image data by manually photographing local plant species, then performed preprocessing using OpenCV to enhance and prepare the dataset. Built a deep learning model using PyTorch in Jupyter Notebook, applied hyperparameter tuning to improve performance, and deployed the final model using Hugging Face for public demonstration and access.

Tools : Python, PyTorch, OpenCV, Jupyter Notebook, Hugging Face, Scikit-learn

Student Score Analyzer – Python File Handling & DSA Project:

Built an end-to-end student score processing system using Python, incorporating core data structure and algorithm concepts. The project reads student records from a text file, performs sorting using Bubble Sort and Insertion Sort, and implements both Linear and Binary Search to find students by their scores. It also calculates the average score, identifies the top and lowest performers, and stores all results in an output file. The project was developed using Python file handling, list operations, and algorithmic logic, with references taken from trusted sources like GeeksforGeeks and W3Schools.

Tools : Python, File Handling, Sorting & Searching Algorithms, List Comprehension

Library Management System – Python OOP Project:

Developed a console-based Library Management System using Python and Object-Oriented Programming principles. Designed classes for **Book, Library, User**, and **Admin** to manage core functionalities including adding books, viewing book availability, borrowing and returning books, and tracking borrowed books with user details. Implemented secure admin access with password authentication and interactive menus for both admins and users to perform library operations efficiently.

Tools: Python, Object-Oriented Programming, Console I/O.

Banking System – Python OOP & File Handling Project:

Developed a console-based banking system using Python and Object-Oriented Programming principles, featuring Personal and Business account types. Implemented core banking functionalities including account creation, login authentication, deposits, withdrawals, fund transfers, and account deletion. Designed persistent data storage using file handling to save and load account details. The system provides an interactive menu-driven interface for seamless user experience.

Tools : Python, Object-Oriented Programming, File Handling

Personal Portfolio Website :

Designed and developed a responsive personal portfolio website to showcase academic projects, technical skills, and achievements. The site features a clean layout, smooth navigation, and interactive elements to enhance user experience. Built with a focus on modern design principles and accessibility.

Tools: HTML, CSS, JavaScript, and Responsive Web Design

Survival Shootout Clone(Pygame);

Recreated a 2D top-down shooter using Python and Pygame by analyzing and replicating core systems such as player movement with physics-based collision, enemy AI with roaming/hunting behavior, and wave-based progression. Independently implemented game mechanics including sprite animations, weapon systems, and UI elements like health bars and score tracking. Troubleshot challenges related to hitbox detection and event handling while documenting the entire development process.

Tools: Python, Pygame

Skills & Interests

Technical:

HTML&CSS

JAVASCRIPT | PYTHON

FrameWorks: REACT

Databases: SQL | MongoDB |PgAdmin | PostgreSQL

UI/UX Design in Figma

Tools: Vscode | GitHub |Terminal

Language:

Dzongkha

English

Interests:

Web and app development, Data engineering and AI.