Enthusiastic and fast-learning Software Engineer with a solid academic background. Proficient in various programming languages and quick to master new technologies. Eager to contribute to innovative projects in a dynamic environment.

Mahmudul Hasan Himel

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Skills

Python, JavaScript, C++, PHP, Linux, React.js, Node.js, Laravel, Git, YOLO, OpenAI Gym, Sable-Baselines3, OTree, PyGame, Unreal Engine, Godot Engine, Docker, PostgreSQL, MongoDB, MySQL

Experience

Experiment Designer (Freelancer)- Computational and Experimental Economics Lab, BRACU
Designed and conducted experiments using OTree. Responsibilities included system design and development, deployment and maintenance on the lab's local network, participant recruitment and assistance, and processing participant payments based on performance.

Education

MEngg in CSE - from May 2024 to ongoing
BRAC University, Bangladesh

BSc in CSE - from May 2020 to Feb 2024
BRAC University, Bangladesh
*Obtained CGPA of 3.69 out of 4 with 7 Dean's Letter out of 11 semesters

Projects

OTree systems for Economics Research -
Learned the OTree framework in one month by reading documentation and built multiple systems for the Economics and Social Sciences Department at BRAC University. These systems were used for paid behavioral experiments in the Computational and Experimental Economics Lab, engaging 140-160 participants per experiment. Additionally, assisted in cleaning and organizing the collected data.
Link to example project, Link to Lab

Auto Advising System for BRACU students -
Built a full-stack PERN system to help students schedule courses that fit their provided time slots, reducing planning time from hours to seconds. Utilized algorithms like DFS and 0-1 Knapsack for course allocation. Link

Simple Game AI -
Built AI for simple games like Flappy Bird and Traffic Rider using Pygame and OpenAI Gym. Implemented various Reinforcement Learning models with Stable-baselines3.

Hybrid DCP based Automatic Bangla License Plate detection for foggy and hazy weather-
In our undergraduate thesis, we proposed a preprocessing method that enables YOLO to detect 33% more license plates in hazy or foggy weather. Testing this on Bangla license plates, we found significant improvements in both detection rate and OCR accuracy.
Link