

Aveen Hussein-Software Engineer

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CAREER OBJECTIVE

Seeking a challenging internship opportunity as a game logic programmer to adapt new games, write scripts to run games, find solutions and to improve user experience. Eager to contribute to a platform for game-lovers, developers and experts responsible for displaying games and setting up their launch.

EDUCATION

ITMO University

Preparatory year for Software Engineering and Multimedia Specialization

Saint Petersburg, Russia

Started Nov 2023

Higher Institute of Applied Sciences and Technology

Damascus, Syria

B.Eng., Software Engineering and Intelligent Systems (valedictorian 2023, 85.65% GPA) Aug 2023

Related Course Work

- Algorithms and data structures
- Machine Learning
- Cryptography and Security
- Compilers and Program Analysis
- Parallel and Distributed Algorithms and Programs
- Data Bases and Data Mining

National Center for the Distinguished

Lattakia, Syria

High school diploma (valedictorian 2016,2017,2018, 90% GPA)

Oct 2018

RELATED PROJECTS

Deep learning based self-driving car with Unity.

March-2023, Sep-2023

Led multidisciplinary research and coordinated the work with 6 supervisors from diverse backgrounds in Computer Vision, Graphics, AI, and Systems Engineering. Achieved a 94% evaluation rating for the project, which was recognized as the top graphics initiative within the institution.

- Designed and developed a realistic simulation of a custom physics system of a car with 202 Lidar sensors and 2 Cameras.
- Implemented dynamic traffic system and applied it to add up to 30 cars and 30 passengers.
- Created a communication channel between C# code simulation and Python code learning algorithm by creating a custom channel in Unity's ML-Agents.
- Compared algorithms and proposed a reward function and tested it with success after 100000 training steps for a training rate of 0.000001 and 30 km/h average car speed after training.
- Initiated and successfully implemented the first-ever integration of cutting-edge computer-vision algorithms CLR-NET and YOLO-v8 into unity to allow for lane and object detection.
- Integrated Open-CV library into unity by creating a custom side channel to send the visual data on the python side and created a visual system in unity that receives the data and creates the proper visuals in unity to allow the user to easily track the lane detection and object detection process in real time.

Take Aim (A Multiplayer First-Person Shooting Game with Unity Engine) July-2022, Sep-2022

Implemented a highly maintainable, testable and reusable C# code following the SOLID principals for the game logic and received 92% evaluation for my work.

- Designed the environment with 2 terrains and a mini map.
- Designed game characters and movement with 6 weapons.
- Designed character animations using Unity's Mecanim to provide a realistic experience.
- Connected the game to an On-Premises server application for a multiplier property of up to 35 players.
- Synced the players actions across the network (shots, kills, deaths, score, health, animation) using remote procedure calls and a messaging system.
- Designed easy to use game interfaces Using Unity.
- Enhanced the game with visual effects using Unity's built in particle systems and sound effects and giving the players the freedom to set their own preferences.

ACTIVITIES

- Team member and participant at the Collegiate Programming Contest (HIAST SVU CPC) 2021, 2022.

SKILLS

Programming: (Proficient) Python, C#, C++, Unity, Unreal Engine, Java, Git -- (familiar) JavaScript, HTML/CSS, PHP, SQL.

Languages: Fluent in English (TOEFL Paper-delivered test: 28 Listening, 27 Reading, 24 Writing (NOV 2018)) and French. Can read and write in Russian, and a native speaker of Arabic.

HONORS AND AWARDS

HIAST SVU CPC 14th place (JUNE 2022) HIAST SVU CPC 18th place (SEPT 2021)