Aveen Hussein-Software Engineer

Vyazemskiy per., 5-7

+79857949129 – **aveen2000hussein@gmail.com** - github.com/aveen007- linkedin.com/in/aveen hussien601523182/

CAREER OBJECTIVE

Ambitious software engineer with solid knowledge of Python and extensive experience in multimedia, deep learning, and computer vision. I am looking for a job in the field of software engineering, as well as teaching opportunities in the field of information technology. I am ready to contribute to the work environment and business projects by collaborating with experienced professionals.

EDUCATION

ITMO University

Master's degree in system and application software   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
- Computer Graphics
- Mobile Application Development
- Parallel and Distributed Algorithms and Programs
- Object Oriented Programming

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.

Intern Software Engineer in the ITMO Laser Technologies laboratory (Strong AI in Industry research center) September-2024, November -2024

- Developed an automatic computer vision labeling algorithm of laser welds and their different defects from lab photos using python and OpenCV.
- Trained an object detection algorithm (YOLOv8) on the labeled data to automate the industrial process of defect detection and correction.
- Developed and integrated algorithms for assessing weld defects according to available GOST standards into the framework being developed in the laboratory.
- Collaborated with a team of software and AI engineers to understand the framework and enhance it.

ACTIVITIES

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

SKILLS

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

Languages: Fluent in English (C2 placement in the TOEFL Paper-delivered test (NOV 2018), Oxford placement test (2023)). B1 level French. B2 level Russian, and a native speaker of Arabic.

HONORS AND AWARDS

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