Andrea Vannini

WORK EXPERIENCE

[31/03/2019 – 22/01/2024]

Software developers

The BioRobotics Institute of Sant'Anna School of Advanced Studies

City: Pisa

Country: Italy

Contacted by engineer Stefano Roccella, I left my freelance job to join the Sant'Anna School of Advanced Studies team aim to participate in the MBZIRC 2020 international robotics competition.
https://www.ku.ac.ae/us5-million-mbzirc-2020-winners-awarded
https://www.santannapisa.it/en/node/49681
As an expert programmer in computer vision, I created the vision system for drones and algorithms for multi-vehicle communication in flight using my knowledge of python, c++ and openCv libraries. During the first experience I learned the basics for autonomous navigation of flying robots, the importance of the ROS system and flight management software (Ardupilot / PX4). With the prestigious 4th place obtained at the MBZIRC challenge, I was reconfirmed in the team. Over the I have been entrusted with numerous new projects and responsibilities, among the most important are:
UAVIMALS, a project funded by National Geographic, is a collaboration with the university "La Sapienza" of Rome, of which I was the chief developer for the realization of the software (python, MATLAB) for creating point clouds using low-cost LIDAR.
https://www.uniroma1.it/it/notizia/archeologia-3d-un-drone-permettera-di-rilevare-strutture-sepolte-non-ancora-indagate-e-di

INGENE 2.0 for the realization of a wireless sensor for the measurement of joint mobility in patients suffering from neurodegenerative diseases, of which I realized the communication software and the acquisition interface with python and QT libraries.
http://ingene.eu/project/it

3rd place 2022 IEEE UAV Chase Challenge (Ri4rover) international robotics competition organized by Purdue University.

1st place 2023 IEEE UAV Chase Challenge (Ri4rover) international robotics competition organized by Purdue University, as lead developer I supervised and designed the entire software system of the drone, coordinating the group of students at the school and integrating the developed codes into my state machine for autonomous driving.
https://ri4rover.org/index.html
https://ri4rover.org/leaderboard.html
https://www.raiplay.it/video/2023/07/Droni-i-nuovi-utilizzi-per-le-situazioni-demergenza---Noos---Lavventura-della-conoscenza-27072023-48928a08-a6bf-407d-989c-8999a10f7ff9.html

EDUCATION AND TRAINING

[19/12/2010]

SCIENZA E TEORIA DELL'INFORMATICA 26 - Classe delle lauree in scienze e tecnologie informatiche

Università degli Studi di SIENA Facoltà di Scienze Matematiche Fisiche e Naturali, Siena (Italia)
https://www.unisi.it/

Address: via Banchi di Sotto 55, 53100, Siena , Italy

Final grade: 110 cum laude

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** B2

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Machine Learning and Deep Learning frameworks Tensorflow Keras PyTorch | Python | Linux | C++ | C | Microsoft Office | Numpy | LaTeX | Machine Learning | Computer Vision | Linux (Terminal Commands, Bash/Shell) | OpenCv | Proficient in Python Java Javascript C C++ and some knowledge of Matlab | ROS(robot operating system) | Ardupilot / PX4

DRIVING LICENCE

Motorbikes: A
Cars: B

BLSD - BASIC LIFE SUPPORT DEFIBRILLATION

[16/11/2020 – 27/09/2024] **BLSD - Basic Life Support Defibrillation**

Cardiopulmonary resuscitation course and use of the semi-automatic defibrillator for all age groups for non-professional personnel