AISSI MOHAMMED

Software, Robotic and UAVs(drones) engineer
PhD. student, Development of autonomous vehicles

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Address: Agdal,10170
City and country: Rabat, Morocco

Autonomous UAV and Automotive software Specialist with 6+ years of experiences. Expertise in software and hardware development. Deployed and integrated major projects locally and internationally. Published scientific papers as a PhD student in autonomous vehicles. Motivated researcher and developer in autonomous vehicles and robotics.

PROFESSIONAL EXPERIENCE

Lear Corporation

Automotive software engineer,
Full-time
Sept 2023 – Present. 10months
Rabat, Morocco

Job Description: Responsible for developing and testing automotive ECU software, including requirement analysis, creating and updating test scenarios, and performing both manual and automated testing.

Projects:

Renault Nissan ECU: USM

Responsibilities:
Software development with MATLAB, Simulink, Stateflow.
SIL and MIL testing.
C code generation and integration testing.
Tools:
MATLAB, Simulink, Stateflow, MATLAB Coder, SIL, MIL, Jira, Confluence, SVN, Git, C, V-Cycle, Agile.
Audi Volkswagen:

Volkswagen AUDI ECU: Connectivity (Con Box)

Responsibilities:
Software testing and qualification.
Requirement analysis and test case creation with DOORS.
Manual and automated testing.
Tools:
DOORS, CAPL, CANoe, Trace32, Wireshark, Candela Studio, CDD, PDX, ODX, DoIP, ODIS, Jira, Confluence, SVN, Git, C, V-Cycle, Agile.

ATLAN Space

Autonomous UAVs deployment and integration engineer,
Full-time
Aug 2018 – Sept 2023. 5years
Rabat, Morocco
Job Description: I was a full task drone engineer I do the following: Deployment and integration of projects including flights, Trainings, Building the vehicles including design, all avionics and electronics needed, purchasing and calculations, software configuration and development.

Taking charge also of developing software and hardware related to the UAVs, autopilots configuration and more others tasks.

Graduate Project Internship,
Full-time
Feb 2018 – Jul 2018. 6mos
Rabat, Morocco
Internship project title: Development of the robotic and computer components of an unmanned aircraft.

WeRobotics – Morocco Flying Labs

Team member and UAVs instructor,
Part-time
Dec 2018 – Present
Oujda, Morocco

EDUCATION

PhD Student, development of autonomous vehicles
Mohammed First University
2018 – Present
Oujda, Morocco

Electronics, computer science and networking Engineer
National School of Applied Sciences
2015 – 2018
Oujda, Morocco

Electrical Engineering and Renewable Energies specialist
Superior School of Technology
2013 – 2015
Oujda, Morocco

PERSONAL ACHIEVEMENTS

- 3+ big projects deployed internationally
- 10+ flying drones - different types
- 3+ unmanned ground vehicles
- Unmanned surface vehicles (simulator)
- Additive manufacturing
- Mobile cartesian robot
- 4 floors elevator with Atmel microcontroller platform
- Solar car racing
- 7500M dragline power factor control

EXPERTISE

- **UAVs, drones:** Deployment and integration, drone piloting, design, and implementation of all types
- **Autonomous vehicles:** UGV "Unmanned Ground vehicles", USV "Unmanned Surface vehicles"
- **Artificial intelligence:** Machine learning, Deep learning
- **programming languages**: Python, C, C++, java, Shell Scripting
- **Embedded systems:** RTOS, ADAS, C/C++, AUTOSAR, JTAG, …
- **Microcontrollers:** ATMEL, STM32, NXP, RENESAS
- **Communication protocols:** MAVLink, CAN, Flexray, LIN, Ethernet, BroadReach, SPI, I^2C
- **Electronic Hardware:** PCB design
- **Robotics:** ROS "Robot Operating System", Robot arms, cartesian robots
- **Image processing:** Computer vision OpenCV, Matlab

- **Autopilots firmware:** Ardupilot, PX4, DJI SDK
- **Linux environment and SBC "Single Board Computers":** Raspberry pi, Nvidia Jetson platforms
- **Simulators:** SITL "Software in The Loop", RealFlight, Gazebo, RVIZ…
- **Additive manufacturing and CNC machining:** 3D Printers, CNCs
- **CAD "Computer Aided Design":** FreeCAD, Autodesk Fusion 360, Autodesk Inventor

CONFERENCES AND COURSES

Aissi, M., Moumen, Y., Berrich, J., Bouchentouf, T., Bourhaleb, M., & Rahmoun, M. (2020, December). **Autonomous solar USV with an automated launch and recovery system for UAV: State of the art and Design**. In *2020 IEEE 2nd International Conference on Electronics, Control, Optimization and Computer Science (ICECOCS)* (pp. 1-6). IEEE**.**

Drones, the future of technology – public
Aero-Club National School of Applied Sciences
Feb. 2021 | Berrechid, Morocco

Mohammed Aissi, Jamal BERRICH, Mohammed RAHMOUN - "**Autonomous self-charging quadcopter with an autonomous solar Unmanned Ground vehicle UGV**" - JOURNEE DOCTORANTS: L'IA A L'UMP 27 JUIN 2022.

Ali El Habchi, Wassim Khiati, **Mohammed Aissi**, Ilham Zerrouk, Jamal Berrich, Toumi Bouchentouf – "**Fast drone obstacle detection approach based on MobileNet classification CNN architectures**" The 5" International Conference on Advanced Technologies for Humanity December 25-26 2023, ENSMR, Rabat, Morocco.

Leila Kelmoua, **Mohammed Aissi**, Ali El Habchi, Zakaria Haja, Mohammed Rahmoune, Jamal Berrich and Toumi Bouchentouf - "**Unmanned Aerial Vehicles (UAVs): From Evolution to Simulation, A Comprehensive Exploration**" - The International Congress on Digital Technologies and Applications May 10-11, 2024, Benguerir, Morocco.

Zakaria Haja, **Mohammed Aissi**, Ali El habchi, Leila Kelmoua, Jamal Berrich, Toumi Bouchentouf, Mohammed Rahmoune - "**Deep Reinforcement Learning for Mobile Robots: Overview and Issues**" - The International Congress on Digital Technologies and Applications May 10-11, 2024, Benguerir, Morocco.

Wassim KHIATI, Ali El Habchi, Ilham Zerrouk, **Mohammed AISSI**, Younes Moumen, Jamal Berrich, and Toumi Bouchentouf - "**State of Charge Estimation for 18650 Lithium-Ion Batteries: A Comparative Analysis Using Technical Specifications from Three Leading Manufacturers**" - The International Congress on Digital Technologies and Applications May 10-11, 2024, Benguerir, Morocco.

CERTIFICATES

Federal Aviation Administration
Issued Dec 2018 · No Expiration Date
Credential ID 1006644-20181226-00451

LANGUAGES

Arabic
Native or bilingual proficiency
English
Full professional proficiency
French
Full professional proficiency