
SUMMARY

Master's in artificial intelligence and electronics engineer focused in computer vision, real time systems and robotics. Interested in developing the technologies that are going to improve our quality of life.

Automation passionate, focusing in task automation to reduce human time spent in tedious jobs helping them to focus on delivering true value.

WORK EXPERIENCE

SOFTWARE DEVELOPER | Jul 2021 - Currently | Amsterdam (Netherlands)

- Development of data acquisition system for new generation microscope. Using **C++17/20**.
- Imaging acquisition algorithms.
- Prototyping of real-time imaging acquisition systems for high force environments.



PRINCIPAL ENGINEER | Jan 2021 - Jul 2021 | Remote (Netherlands)

- Incorporation of Emotion Research Lab **computer vision** technology to Uniphore's during **acquisition phase**.
- Deployment of a **highly scalable Deep learning platform** for video processing in **real-time**.



TECH LEAD | Jan 2019 - Jan 2021 | Valencia (Spain), Remote (Netherlands)

- Responsible of AI technology and development.
- Develop a product up to the acquisition of the company from a 100M\$ Series C company.
- Deployment of a **highly scalable Deep learning platform** for video processing in the cloud using **AWS ECS**.
- Emotion recognition pipeline implementation in **C++** and **Tensorflow**.
- Development of a **multi-platform** automatic release for Windows, Linux (CPU, GPU) and **Jetson** platform.
- Using DevOps practices, set up CI pipelines for process automation and improvement of productivity during software life cycle.
- Core library **migration** from **C++98** to **C++14**.



COMPUTER VISION DEVELOPER | Ago 2017 - Oct 2018 | Vigo (Spain)

- Development and fine-tuning of object detection pipelines for embedded devices deployment based on Deep Learning (**Caffe** and **Tensorflow**).
- Research and implementation of pipelines focusing in fast inference (**Intel Movidius**, **TensorRT**, **TF Lite**).
- Development of a system for vehicles and pedestrian counting and tracking in real-time. (**Jetson Board**, **C++14**)
- Development of a semi-automated development and testing suite for deep learning models to decrease the time between experiments.



XESOL innovation

JUNIOR CONSULTANT | Feb 2016 - Feb 2017 | Valencia (Spain)

- Full stack web development.
Keywords: **Java**, **Spring**, **Hibernate**, **ExtJS** and **Oracle RDBMS**.



DEVELOPER | Jun 2015 – Feb 2016 | Valencia (Spain)

- Android development: Facebook friends quiz, sickness predictor, several speed reflex games.
- Development of booking platform for sport centers.
Keywords: **Android, JavaScript, Java.**
- Embedded device prototyping and development.
Keywords: **C, C++, CORTEX-M4, ANDROID, 3D Printing, Java.**



TRAINEE | Oct 2014 – Feb 2015 | Gdansk (Poland)

- Sales team support from the technical point of view.
- Technical presentations to potential customers.



EDUCATION

Oct 2021 – Jul 2023 | **MSC ARTIFICIAL INTELLIGENCE'S RESEARCH** - *Specialty in reasoning and planning.* Universidad Internacional Menéndez Pelayo (Spain)

Master's thesis: Satellite imaging analysis for invasive algae detection in the surface of lakes.

Oct 2018 – Dec 2018 | SCHOOL OF ARTIFICIAL INTELLIGENCE SCHOLARSHIP

Received a two-months full scholarship (valued in 20.000€) to participate at the School of Artificial Intelligence of Pi School. Selected among some of the brightest Engineers in the field, as a scholarship winner, I worked on a project in deep estimation with only monocular vision.

Feb 2017 – Mar 2018 | SELF-DRIVING CAR NANODEGREE

The program contains the next topics: Computer vision, deep learning, machine learning, sensor fusion, localization, control systems and path planning.

It is focused on developing the necessary understanding and technical skills to create an autonomous vehicle able to drive safely in public roads.

2010-2014 | BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATION

ENGINEERING - *Specialty in embedded system and Real-Time computing.* Universitat Politècnica de València. (Spain)

Final thesis (**A grade**): Cross-platform Qt application for the automatic control of liquids tank. QML, C++

2014 SPRING SEMESTER | ERASMUS SCHOLARSHIP

Faculty of Electrical Engineering. České vysoké učení technické v Praze. Prague (Czech Republic)

PROJECTS

- Telegram bot to detect and classify fish species from photos. Telegram API, Python, Tensorflow.
 - Autonomous maritime drone. Raspberry Pi, C++, Python, Qt, QML, 3D modeling & printing.
 - Vehicle detection & tracking with OpenCV and deep learning approaches. Python, OpenCV, Keras, Machine learning.
 - Lane detection in the road using computer vision techniques. Python, OpenCV.
 - Traffic sign identification and classification. Python, Tensorflow, OpenCV.
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