

Richard Coll Josifov

Stockholm, Sweden · Barcelona, Spain

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Education

M.Sc. Applied and Computational Mathematics

Aug. 2022 - May 2024

KTH ROYAL INSTITUTE OF TECHNOLOGY

Stockholm, Sweden

- Specialisation: Mathematics of Data Science. GPA: 4.9/5
- Some relevant courses include: Probability Theory, Regression Analysis, Computational Mathematical Statistics, Stochastic Differential Equations, Numerical Algorithms for Data Science, Numerical Methods, Operations Research.
- Courses to be taken: Statistical Learning, Statistical Machine Learning, Topological Data Analysis, Advanced Real Analysis.

B.Sc. Electronics Engineering

Sept. 2018 - July 2022

POLYTECHNIC UNIVERSITY OF CATALONIA · BARCELONATECH

Terrassa, Spain

- First of the 2022 promotion. Average grade of 9,3 out of 10 with honours (“Matrícula de honor”) in over half of the courses (150/243ECTS), amounting to fee reduction of 6.000€.
- Recipient of the Tavil Scholarship which covered full tuition fees as well as paid internships during the degree.
- Specialization in Systems, Control and Robotics, with courses in dynamic systems modelling, advanced control systems, among others.
- Bachelor's final thesis: “Deep learning based computer vision for aerial-view object detection and classification”, at the Advanced Control Systems research group, which led to a conference publication.

Publications

- Coll Josifov, R.; Masip Álvarez, A. and Lavèrnia Ferrer, D., “Deep learning techniques applied to traffic accidents prediction”, *XLIII Jornadas de Automática 2022*.

Work Experience

Research Assistant

March 2021 - March 2022

MCIA CENTER INNOVATION ELECTRONICS, POLYTECHNIC UNIVERSITY OF CATALONIA

Terrassa, Spain

- Worked as a research assistant to PhD student Ángel Fernández under the supervision of Dr. Miguel Delgado doing research in flexible production lines, within the industry 4.0 framework.
- Among my duties there were the development of software for PLCs to control an industrial plant model that increased its flexibility and allowed for a generic base upon which further diverse applications can be build, building the software infrastructure to allow for the digitization of the plant and to create a digital simulation of it, as well as the maintenance of the research group's lab webpage and supporting students doing their thesis within this area.

Research and Development Intern

Aug. 2019, Aug. 2020, July - Aug. 2021

TAVIL IND, SAU

Olot, Spain

In total three summer internships during my bachelor, in which I did the following:

- Regression Analysis to adapt the industrial line to multiple products.
- Implemented LAN communication systems to interconnect several devices.
- Created a software to allow the automation of CNC files creation through a GUI.
- Developed control programs for a DC motor in BASIC.
- Programming of industrial robotic systems, as well as a bicycle simulator demo.

Honors, Awards & Scholarships

2022	First of promotion award , Finishing first out of 75 in the 2022 Electronics Engineering promotion (500€).	Terrassa, Spain
2021,2022	Initiation to Research Grant (INIREC) , 6 months MCIA INIREC grant (1.800€).	Terrassa, Spain
2021	Initiation to Research Grant (INIREC) , 6 months Santander Bank-UPC initiation to research grant (3.150€).	Terrassa, Spain
2018	Tavil Scholarship , to cover studies fees (10.000€).	Olot, Spain
2018	Distinction , University Access Exams, for a mark of 96%.	Barcelona, Spain

Skills

- Programming Languages: Matlab, C, C++, Java, Python
- Languages: English (level C2), Catalan (Native), Spanish (Native)