DAVID ÁLVAREZ ROSA

Mathematics and Industrial Technology Engineering graduate

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EXPERIENCE 💼

Visiting Researcher
Vector Institute   Full Time – 10 months

📅 September 2020 – June 2021   💻 Toronto, Ontario

During my research thesis at the University of Toronto, I was admitted in Vector Institute, which allowed me to experience the world of research first-hand using their exceptional high-performance computing resources with the technical assistance of the development team.

Perception Engineer (LiDAR)
Driverless UPC   20 hours/week – 6 months

📅 September 2019 – February 2020   📍 Barcelona, Catalonia

I have been part of the Perception section of Driverless UPC team, formed by undergraduate engineers in charge of the designing, manufacturing and testing of a fully **autonomous** car. LiDAR responsible and computer vision collaborator.

EDUCATION 🎓

MSc in Advanced Mathematics
National University of Distance Education – Faculty of Sciences   GPA Unknown

📅 September 2021 – June 2023   📍 Madrid, Madrid

Math-lover part-time student. Official study program focused on research and enabling PhD.

Bachelor's Thesis[1]
University of Toronto – Dept. of Computer Science   GPA 10/10 (A+)

📅 September 2020 – June 2021   💻 Toronto, Ontario

Conducted research on Artificial Intelligence for my senior Bachelor's Thesis at the Computer Science department of the University of Toronto under the supervision of Prof. Fidler and Prof. Giró.

BSc in Mathematics
Polytechnic University of Catalonia – Faculty of Mathematics   GPA 8.12/10

📅 September 2016 – June 2021   📍 Barcelona, Catalonia

A rigorous and proof-oriented course with a robust mathematical base, providing a solid knowledge in its applications (algorithms, computing). Honors or excellence in 9 subjects.

BEng in Industrial Technology Engineering
Polytechnic University of Catalonia – School of Engineering   GPA 8.03/10

📅 September 2016 – June 2021   📍 Barcelona, Catalonia

Multidisciplinary and integrative vision of industrial engineering. Acquired knowledge and skills essential for future technological development. Honors or excellence in 14 subjects.

Scientific and Technological Baccalaureate
Irabia-Izaga School   GPA 9.47/10

📅 September 2014 – June 2016   📍 Burlada, Navarre

Finished with honors obtaining 12.76/14 on University Access Exam.

INSPIRATION 🗨

"The science of today is the technology of tomorrow."

SKILLS 🚀

Accustomed to working in a team, motivated and detailed in projects.

Programming languages.
Solid knowledge of:

`C++` `Python` `Octave/Matlab`

Worked with: `Bash` `R` `PyTorch`

Experience in **web development**:

`HTML` `CSS` `JavaScript` `PHP`

Others: `Linux` `Git` `ROS` `LaTeX`

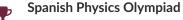## LANGUAGES 🌐

Spanish ●●●●●
Mother tongue.

English ●●●●◐
C1 level accreditation (August 2017).

Catalan ●●●◐○
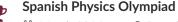Very good understanding of the language. Intermediate level in oral and written expression.

AWARDS 🏆

🏆 **Spanish Physics Olympiad**
📅 April 2016   📍 Seville, Andalusia

Silver medal in the national phase.

🏆 **Spanish Physics Olympiad**
📅 March 2016   📍 Pamplona, Navarre

Winner of the local phase.

🏆 **Spanish Mathematical Olympiad**
📅 January 2016   📍 Pamplona, Navarre

Second position in the local phase.

COURSES 📔

Blockchain & Financial Technology
24 hours
The University of Hong Kong
📅 June 2021 – Present

Deep Learning Specialization
80 hours
deeplearning.ai
📅 June 2021 – Present

CNNs for Visual Recognition[2]
10-week course
Stanford University
📅 October 2020 - December 2020
Completed all coursework.

Machine Learning
60 hours
Stanford University – Coursera
📅 August 2020 – October 2020

Mathematical Game Theory
20 hours
Polytechnic University of Catalonia – CFIS
📅 April 2019
Game theory is the study of **mathematical models** of strategic interaction among **rational** decision-makers.

Machine Learning & Deep Learning[3]
20 hours
Polytechnic University of Catalonia – CFIS
📅 January 2019

PROJECTS ⚙️

Neural Network Implementation[4]
25 hours
Personal Project
📅 September 2019 – October 2020

Robotic Arm – Tic Tac Toe[5]
75 hours
Polytechnic University of Catalonia – School of Engineering
📅 January 2019 – June 2019
Virtual animation of robotic arm able to play TicTacToe and **never** lose.

Simplex Algorithm in C++[6]
15 hours
Polytechnic University of Catalonia – Faculty of Mathematics
📅 October 2018 – December 2018

Personal Website & Private Email Server
50 hours
Personal Project
📅 August 2018 – Present
Website design and configuration of email server.

Study Schedule Generator[7]
60 hours
Polytechnic University of Catalonia – School of Engineering
📅 January 2018 – June 2018
Study schedule adapted to student performance (data analysis).

OTHERS ✳️

Former Violinist
📅 2008 – 2015   📍 Pamplona, Navarre
I played the violin in the conservatory in its first courses.

Mathematics Tutor
Academic classes of support and preparation for the Mathematical Olympiads.

Food Gatherer
📅 2014 – 2016   📍 Pamplona, Navarre
Food collection for the needy (volunteer).

Linux User
Years of use of Linux distributions (Arch, Debian and Ubuntu).

System Administrator
Administrator of personal VPS: data synchronization between devices, website, email, personal Git server.

Athlete
Regular sportsman, runner and ex-triathlete.

Driving License
📅 October 2017   📍 Pamplona, Navarre
Spanish driving license (B).

FOOTNOTES 📑

For the accessibility of the document, the most relevant links are included.

1. recomprehension.com
2. cs231n.stanford.edu
3. sites.google.com/view/dlcfis2019/home
4. gitlab.com/david-alvarez-rosa/neural-network
5. david.alvarezrosa.com/tres-en-raya
6. gitlab.com/david-alvarez-rosa/simplex-algorithm
7. david.alvarezrosa.com:5000

INTERESTS & PERSONAL STATEMENT 🔍

Ambitious, hardworking and open-minded leader with a passion for Maths, Artificial Intelligence and Engineering. I am an outgoing person, with a highly analytical mindset, who likes to debate and learn from others. I have the ability to motivate those who surround me in order to provide meaningful solutions for real problems, with a goal-oriented approach.

Interested in areas of knowledge that involve my two fields of studies in conjunction, such as Artificial Intelligence, Robotics and Data Analysis. Actively seeking for job opportunities at a leading company in order to get real-world experience and grow as a professional.