

Javier López-Contreras

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Ronda de St. Pere 50, Barcelona, Spain

I'm a freshman in Mathematics and Computer Science. I have concluded high school in which I have received the maximum honours. I consider myself a creative, hard-working and enthusiastic person, with a great thirst for knowledge.

1 Education

Universitat Politècnica de Catalunya 2018 – 2023

Degree in Mathematics Current Grade: N/A
Degree in Computer Science Current Grade: N/A
Full tuition scholarship for academic excellence from the Centre of Interdisciplinary Superior Formation
I haven't finished the first semester, which means I still have no relevant grades

Aula Escola Europea 2016 – 2018

International Baccalaureate Final Grade: 91%
Spain National Baccalaureate Final Grade: 95%
Full tuition scholarship for academic excellence from CiMs-Cellex foundation

2 Experience

Informatics Olympiads 2016 – 2018

Most of my experience in programming and in algorithms comes from the world of competitive programming. I have been a finalist in 2 International Olympiads and I have assisted several bootcamps, courses and classes.

Centro de Astrofísica da Universidade do Porto 2018

Summer Intern during 1 week, in a research institution in the field of computational astrophysics led by Dr. Carlos Martins. My main responsibility in this project was to optimise time complexity of physical simulations using randomised algorithms.

Institute of Astrophysics of the Canary Islands 2017

Summer training camp during 1 week, in Tenerife, Spain. I learned about telescope use and data treatment and analysis. During this camp, I started the *AstroSpotter* project.

3 Projects

AstroSpotter

Heuristic Redesign of the Hungarian Algorithm for Automated Asteroid Detection.
With a friend, we developed and implemented an algorithm to automatise the detection of asteroids. The code is free to download here:

<https://github.com/javierlc2000/AstroSpotter>.

4 Awards

Intel's International Science Fair for *AstroSpotter* project 2018
3rd Intel Grand Award
2nd NASA Special Award

Olympiads

International Olympiad in Informatics: Finalist 2017, 2018
Spanish Olympiad in Informatics: Gold Medal 2017, 2018
Spanish Olympiad in Mathematics: Silver Medal 2018
Catalan Olympiad in Mathematics: Gold Medal 2018
Catalan Olympiad in Informatics: Gold Medal 2018

Excellence-based scholarships

Centre of Interdisciplinary Superior Formation 2018
to study a double bachelor degree in the fields of STEM.
CiMs-Cellex Scholarship 2016
to study the International Baccalaureate.
Joves i Ciència 2016
for 3 summer internships in the field of astrophysics.

Other Awards

Hello Barcelona ACM-ICPC Boot Camp: Participant 2018
Exporecerca National Science Fair: Top Prize 2018
HP Codewars Houston: Finalist 2018
HP Codewars Barcelona: 1st Position 2017

5 Other Skills and Interests

Programming Languages

C++, Java, Python

Languages

Spanish (native), Catalan (native), English (proficient), French (intermediate).

Foreign Exchanges

Australia: Mornington Secondary College. 6 months high school student

USA: 1 month stay in Vermont and 1 month stay in Portland during two consecutive summers.

France: 1 month stay in Vichy, attending language school Cavilam

Music

Elementary and Intermediate Studies in Music Theory and Violin

Sports

Member of *Cambre d'Aze Ski Competition Club* for 5 years.

Member of *Estació del Nord* high performance swimming club for 2 years