

Pedro Llanos Arroyo

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About me

I'm a Computer Science and Computer Engineering living in Barcelona. I'm interested in Artificial Intelligence Systems, Multi-Agents Systems, Fuzzy Logic, Deep Learning, Reinforcement Learning, Signals Processing - such as Image, Video, Sound, Speech, Position, Communications, Temperature, Humidity, Pressure, Touch, Lidar, Sonar, Laser -, Control Theory - such as Linear or Non-Linear PID Control Methods, Path Planning, Kalman Filter -, Dynamics Systems - such as Navier-Stokes equations -, Robotics - such as Flying, Floating, Leggeds, Wheels, Arms, Head -, Avionics, Satellites, Rockets, Space, 3D Heterogeneous Simulations with Dynamics Systems in Unreal Engine, Real-Time OS, Heterogeneous High-Performance Computing (HPC) - such as Local Cluster, Cloud Computing (Google Cloud, AWS, Azure), Edge Computing, Distributed Computing -, Decentralised or Distributed Systems - such as key-value MapReduce, Raft or Multi-Paxos consensus, Chubby, ZooKeeper, etcd3 -, Low-Power Hardware - such as MultiCore-DSP, VPU, FPGA Xilinx, Arm Neon and Mali GPU -, Design Schematic of Embedded Systems (PCB) - such as Kicad PCB Design, PCB Manufacturing -.

After a few years of preparation, the time has come. Today, I feel comfortable saying that I'm ready to implement all those ideas that I have always wanted to do. At this stage, I will continue learning, improving, and above all, maturing as a professional. I would like to continue independently, creating my projects and companies in the short and medium-term. The mission is to build safe artificial general intelligence that benefits all society to solve the world's most significant problems by collaborating with passionate people about what they do. However, I still have to grow a little more. To do that, I will collaborate with other companies with a similar philosophy, and I will looking for amazing people.

Education

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| 2014–20 | Computer Science and Computer Engineering at Polytechnic University of Catalonia (UPC) in Barcelona. My thesis was titled <i>The Cooperative Negotiation and Coordination Approach in a Multi-Agent System for a Dynamic Real-Time Environment</i> and is available through the UPC Research Archive. |
| 2011–13 | Senior Technician in Telecommunications and Computer Systems at IES Anna Gironella of Mundet in Barcelona. |

Non-official Education (some subjects as a listener)

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|---------|-----------------------------------------------------------------------------------------------------------------------|
| 2019–20 | Degree in Data Science and Engineering at Polytechnic University of Catalonia (UPC) in Barcelona. |
| 2018–19 | Degree in Electronic Telecommunications Engineering at Polytechnic University of Catalonia (UPC) in Barcelona. |

Work Experience

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| 2016–18 | Systems Administrator (UPC Intern Support) at Department of ETSEIB Mathematics in Barcelona. |
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Languages

- | | |
|---------|-------------------------------------------------------------------------------------------------------------|
| | Spanish Catalan (Native) |
| | English (Intermediate to First) |
| 2015–16 | Certificate of Completion English Course - First (60h) at ChapterHouse Dublin in Ireland. |
| 2012–13 | Certificate of Completion English Course - Pre-Intermediate (60h) at CCD Central College Dublin in Ireland. |

Areas of expertise

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|-------------------------|----------------------------|---------------------------------|
| Advanced Data Structure | Multi-Agents Systems | Real Time Systems |
| Advanced Algorithmics | Distributed Systems | Code Profiling, Tracing and Bit |
| Deep Learning | Advanced Robotics | Hacks |
| Machine Learning | Heterogeneous High- | Parser and Generator of ANTLR4 |
| Reinforcement Learning | Performance Computing | Grammars |
| Signals Processing | Low-Power Embedded Systems | |

General skills

- | | | |
|-------|-----------------------------|-------------------|
| LaTeX | GitHub / GitLab / Bitbucket | UNIX / Windows OS |
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| Technical skills | Computer Science | Computer Engineering | Software Engineering | Audiovisual Production |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Programming languages | C, C++, Python, R, Haskell, Matlab | OpenMP, OmpSs-2, PyCOMPSs, OpenACC, OpenBlas, MPI, OpenCL, CUDA, PYNQ, Vivado HLS Xilinx, VHDL, MIPS Assembly, VLIW Assembly, ARM Assembly (RISC), x86 Assembly (CISC), RISC-V Assembly | Java, C#, PHP, Ruby, HTML5, Jade, CSS3, Javascript, Typescript, Sass, JSON, XML, AJAX, Swift, MySQL, PostgreSQL, MongoDB, SQLite, Firebase Realtime Database, Gruntjs, Bower.io, Yeoman.io | - |
| Machine and Deep Learning Frameworks | OpenCV, Scikit-learn, Keras, TensorFlow, Torch, PyTorch, Theano, Caffe, DL4J, MXNet, ONNX, OpenNN, CNTK, Spark, Apache | - | CVAT, Label Studio, LabelBox | - |
| General Frameworks | - | Google Cloud, AWS, Azure, Docker, Kubernetes, Vagrant, VMWare, VirtualBox, PCB Design Kicad | Android Studio, Xcode(iOS), Grafana, Prometheus, Nmap, Wireshark, MetaSploit | Adobe Premier Pro, Adobe After Effects, Adobe Photoshop, Adobe Audition, Cinema 4D, AutoCAD, SketchUp, Inventor, SolidWorks |
| Frontend Frameworks | - | - | Angular, React, React Native, Vue, jQuery, Ionic | - |
| Backend Frameworks | - | - | Node.js, Express.js, Flask, FastAPI, Firebase CRUD | - |
| Games Engines | OpenGL, WebGL, GLSL, PhysX | - | Qt, Blender, ZBrush, 3ds Max, Maya, Unity, Unreal Engine, Twinmotion, CryEngine | - |