



DAVID VILELA

PHD INDUSTRIAL ENGINEER

I'm an industrial engineer specialized in civil engineering with eight years of research experience in the mechanical engineering branch, more precisely in implementation of multibody simulators applied to virtual reality, vehicle simulation, mechanisms and machinery. I've worked on the development of real-time vehicle models for hardware-in-the-loop platforms and my PhD thesis was focused on contact models and collision detection for virtual assembly, including a stay at the Computer Graphics and Virtual Reality Group from the University of Bremen, specialized on computer graphics, artificial vision, virtual reality and natural user interfaces. I've also developed hardware and control software for haptic interfaces and I've taught Computer Assisted Design at the University of A Coruña.

I am particularly interested in new technologies: machine learning and AI, blockchain and decentralized systems, robotics, autonomous vehicles, networks and communications, simulations, videogames and virtual and augmented reality.

I am a great enthusiast of science and divulgation, the aerospace industry, physics and mathematics, music, design, LEGO blocks and I'm fascinated by the human brain and how things work, as well as explaining and teaching them.

CONTACT

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EXPERIENCE

- 2019 - Present **Mechanical Engineering Laboratory, UDC**
Research support technician
- 2014 - 2018 **Mechanical Engineering Laboratory, UDC**
FPI Predoctoral Researcher and PhD Teaching Assistant
- 2017 **Computer Graphics Group, University of Bremen**
PhD student on international stay
- 2012 - 2014 **Mechanical Engineering Laboratory, UDC**
Research assistant
- 2011 **Department for Urban Planning, Town Hall, Cedeira**
Internship student
- 2007 **Civil Protection, Cedeira**
Stage assembly, light and sound installations and security staff

EDUCATION

- 2014 - 2018 **PhD in Industrial Engineering**
University of A Coruña
- 2012 - 2013 **Industrial Engineering Research Master's Degree**
University of A Coruña
- 2003 - 2011 **Industrial Engineering Master's Degree**
University of A Coruña

COURSES AND ACTIVITIES

- 2014 **C1 Certificate in Advanced English**
Cambridge School
- 2013 **Introduction to Python** 20 hours
University of A Coruña
- 2011 **Introduction to Artificial Intelligence** 8 weeks
Stanford University (online)
- Introduction to Machine Learning** 8 weeks
Stanford University (online)
- Child Education and Support Volunteering** 3 weeks
Nepal Sonríe NGO
- 2008 **Welding** 20 hours
Navantia Ferrol
- 2004 **C programming** 50 hours
- 2003 **Coastal Skipper**
Nautical and Fishing School, Ferrol
- 2002 **Basic and Intermediate English** 4 years
Official School of Languages, Cedeira
- 2001 **AutoCad** 30 hours

SKILLS

- Development* C++, C, Python, Fortran, Matlab/Octave, Labview, HTML/CSS, GNU/Linux
- Design and edition* Solid Edge, Solid Works, Blender, AutoCad, Inkscape, Gimp
- Languages* English, Spanish, Galician
- Artistic* Guitar
- Other* Driving license

