#Forestry #GIS #Remote Sensing #LiDAR #Research

Luis Puerto

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Profile & Objective

I am a dynamic and versatile Forest Engineer from Spain with more than 10 years of diverse and wide experience in GIS and remote sensing. I have been working lately on research projects involving LiDAR, biomass and R language. I have experience working internationally, in different fields related to technology and interdisciplinary teams. I have great ability to learn, and I have an analytical mind. I am mainly looking for challenging projects related to GIS, remote sensing technologies and new ways to acquire data where I can use my background and skills, learning new ones in the process.

Education

Ongoing: MSc. iGEON. Master of Science in Geographic Information Science (GIS) and Earth Observation for Environmental Modeling and Natural Resource Management. (120 ETCS | Online) (http://www.igeon.eu)
Lund University (Sweden) and University of Twente (Netherland)

2012: Degree in Forestry and Environmental Engineering (240 ETCS), University of León, Spain.

2008: Bachelor of Agricultural Engineering (Forestry) (180 ETCS)**,** University of León, Spain.

Experience

2017-2018: Independent consultant and professional

- Develop web projects in Jekyll platform. HTML, CSS, Liquid templating, Git, Continuous Integration and some Ruby.
- Manage a small network using Raspberry Pis as small home server for different applications such as R Studio server, VPN server, NAS, cloud storage, wireless audio streaming, ad blocker, internet speed logger and many others.
- Setting AWS for parallel computing on the cloud with R Studio server, passing from 2 days analysis to 1h.

2015-2017: University of Easter of Finland. Various LiDAR projects. Total 9 months

- Download, processing and analyzing the whole LiDAR information of Finland using Fusion, LAStools, LidR and others.
- Scripting in R language to process and analyze LiDAR data. Statistical modeling to yield biomass estimations.
- Co-write a paper about estimation of forest biomass components using airborne LiDAR and multispectral sensors

Nov 2014: Metsäkeskus. Finnish language course internship. Creation of digital cartography

- Analyzing and processing Metsäkeskus' inventory data in Finnish to create digital cartography.

2014-2016: Intensive Finnish Language Courses.

- I took 3 courses, which were more than 1500 hours in total, about Finnish language and culture

May 2009 – Dec 2012: Fundación Ciudad de la Energía (City of Energy Foundation), Spanish Government.

- Last position: Coordinator **of Technology & Innovation Area at Technology & Systems Department**
- Leader of a multidisciplinary team of four members related to technology and programming.
- Co-responsible to commission the digital platform for the *Ene. Museo Nacional de la Energía*. 1-million-euro project.
- Develop, implement and commission different kinds of **technological systems** such as public Wi-Fi networks, ticket-selling systems, geolocation systems for people and objects, and cloud computing systems.
- Responsible of the **Geographic Information Systems (GIS)**. Cartography elaboration (such as two tourism maps, web apps or in-house cartography), data analysis, geodatabase keeping and in-house GIS training.
- Responsible of the office tasks of **"Assessment of the current phytosanitary status of European chestnut in El Bierzo (León, Spain)"** project; managing field work, inventory operations, and data processing and analysis.
- Collaborator in several projects:
  - **Heritage Inventory of El Bierzo and Laciana Counties**. Helping to plan field works, develop the inventory and coordinate and create a database. Also, subsequent analysis of data using GIS methodologies.
  - **La Mirada Circular** (more than 300 km of hiking routes): Help to organize activities, signaling, mapping and managing.
  - Lots of other activities about environment, alternative and clean energies, tourism and territory analysis.

2009: Freelance consultant for TRAGSATEC; collaborate in the preliminary plan for the Pajariel Forestry Park.

- Collecting data in the field, team organization, and cartography elaboration.
- GIS multi-criteria analysis of data develop and analysis proposals of restoration and activities for the park.
- Analysis of potentialities and the development of citizen participation process.

2005-2011: Several projects as freelance such as:

- Development of Geographic Information Systems in **ArcGIS, ArcPAD & ArcView** and blueprints in **AutoCAD**.
- Experience as a judicial expert in court and writing a judicial report for one side.

2007-2008: Ponferrada Municipality (9 months) at the project "Integral Management of the Ponferrada's Mountains".
Forest and office technician and consultant:

- Forest inventory of more than 12000 ha, in-filed decision making about forest management and GIS analysis of data.
- Co-writing of strategic management report for the forest for the following 10 years.

2006: Tecnosylva SL. (6 months). Forest technician and consultant:

- Inventory of forest roads, with GPS, ArcPAD, and off-road vehicle. Over 2000 km.
- Cartography generation and digitalization in ArcGIS software.
- Collecting data in field with professional GPS. Advanced knowledge of GPS methodology.
- Forest inventory with computing systems such PDA, Vertex, and electronic caliper.

Additional Training

- 300 hours of training courses on **ArcGIS 10 Desktop and Server** systems, including Oracle DDBB and programming in python and add-ins, by ESRI Spain
- Course **Sextante** (GIS toolbox) by Uni. of León (20 hours).
- Course **"Thematic Cartography"**, by the Spanish National Geographic Institute (40 hours).
- Course of "**Learn to Program: The Fundamentals**" in Python, by University of Toronto (50 hours).
- Course "**Certification and Audition Systems** in forest exploitations" by PROFOR (144 hours).
- Course of **Fire Management**, by Swedish University of Agricultural Sciences (SLU) (200 hours).

- Course **AutoCAD 2011** 2D & 3D, by IFESS (40 hours).
- Course "**Health and Safety** on forest exploitations" by PROFOR (144 hours).
- Course **"Defending Forest Against Wildfires"**, by the Spanish Forest Engineers Official Association (30 hours).
- Course about **Biomass** by CARTIF Foundation (60 hours).
- Course **"Forest Planning"**, by Castile and León Government (50 hours).
- Course on **Project Management** by Adecco (15 hours)
- Course of **Wonderware** by Wonderware Spain (35 hours).
- I've assisted to many others talks, seminaries, conferences and congresses at local, national and international level.

Languages

- Spanish: Native Speaker
- English: Advanced level. TOEFL iBT score 96
- Finnish: A2
- Swedish: A1

Computing Skills

- ArcGIS & AutoCAD
- Photoshop
- macOS, Windows & Linux
- R stats & Python
- Fusion, Lastools & LidR
- Git, GitHub & GitLab
- Shell scripting, databases and web developing

Complementary Activities

- **Volunteering:**
  - **Albany Historic Carrousel**: Setting the animals, assembling the wooden structure and helping with the mechanical and electrical systems.
  - **The Hour of Code**: Teaching code to 4th grade school students.
  - Cultural volunteering: Immigration inclusion, developing leisure programs for children.
- Self-learner about Project Management and personal Productivity. "**Fifth Discipline**", "**Systems Thinking**", "Learning Organizations"enthusiast and curious about new ways of learning and similar subjects.
- Very interested in social media and the new ways of communicating ideas.
- Science and technology lover. Rational thinker. Always trying to implement technology to be me more efficient.
- Photography enthusiasm and eager learner of almost everything.
- I like the **adventure**, hiking and camping in the wilderness.

Other Data

- International driving license and off-road experience
- Availability for traveling all around the world

References

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