



Emma Garcia Boadas

Date of birth: 30/05/1994 | **Nationality:** Spanish | **Phone number:**

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● PERSONAL STATEMENT

Personal Skills

Passionate, creative, enthusiastic, and hard-working Geologist. Interested in the understanding of the earth's surface and its dynamics. Interested in both the academic and the private sectors. With active involvement in extra-curricular activities and volunteering. Previous academic and volunteer experience has enhanced personal and interpersonal skills such as personal growth, commitment, constancy, creativity, leadership, and communication. Possesses natural teamwork qualities facilitating smooth and strong cooperation with the members of any working environment.

● WORK EXPERIENCE

15/01/2024 – CURRENT Munich, Germany

INTERSHIP GERMAN AEROSPACE CENTER (DLR)

- Master these project, title: Mapping of Water Quality Dynamics Derived from Hyperspectral Earth Observation Data for the Tam Giang Lagoon in Central Vietnam

- Data: EnMAP, PRISMA, DESIS

20/03/2023 – 17/10/2023 Salzburg, Austria

UNIVERCITY RESERCH ASSISTANT UNIVERCITY OF SALZBURG

-Lava mapping with TerraSAR-X, images.

-InSAR processing in a landslide in New Zealand with open-source software SNAP2StaMPS.

06/2020 – 11/2021 Barcelona, Spain

JUNIOR INSAR ENGINEER, REMOTE SENSING GEOLOGIST SIXENSE GROUP

Interpretation of InSAR data and optical images in operational projects for clients in the infrastructure and mining sector. SAR Interferometry (PSI) processing with ATLAS software in monitoring projects. Multi-sensor (Sentinel-1 A/B, TerraSAR-X) processing for land surface displacement monitoring. Reporting of operational projects for customers in infrastructure and mining sectors. Postprocessing of InSAR data results.

12/2019 – 07/2020 Girona, Spain

GEOLOGIST GEOSERVEI PROJECTES I GESTIÓ AMBIENTAL S L

Hydrogeology and edaphology mapping, GIS consultant, geotechnical projects.

05/2019 – 08/2019 Barcelona, Spain

TECHNICAL REMOTE SENSING GEOLOGIST LITHICA SCCL/ CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)

GEO3BCN Geociencias Barcelona-CSIC

Field exploration in the mining sector. Develop ore estimation with portable laboratory cameras, images (optic, hyperspectral).

09/2017 – 05/2019 Barcelona, Spain

TECHNICAL REMOTE SENSING GEOLOGIST DARES TECHNOLOGY

Optical image processing (Sentinel-2, ASTER, Landsat-8) and land mapping. Interpretation of optical images. Interpretation of the combination of radar and optical results in operational projects for clients in the mining sector.

SAR Interferometry (PSI) processing with (CPT) software. Multi-sensor (Sentinel-1 A/B, ERS/ENVISAT ASAR, TerraSAR-X, Radarsat-2.) processing for land surface displacement monitoring. Management of operational projects for customers in the oil & gas, mining, and infrastructure sectors. Post-processing and interpretation of InSAR data results.

06/2017 – 09/2017 Barcelona, Spain

INTERSHIP DARES TECHNOLOGY

Collaboration in reports of ground deformation, interpretation of the ground deformation, and adding earth sciences value (geological maps, climate data, pluviometry data, and optical images interpretation).

09/2016 – 07/2017 Barcelona, Spain

INTERSHIP CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)

GEO3BCN Geociencias Barcelona-CSIC

Department: Environmental Geology and Geohazards

Research Group: Environmental Changes in the Geological Record

Practice, and elaboration of the final degree project. Related to a multidisciplinary project in Deception Iceland, the final project was to integrate optical multispectral data and sampling data gathered on the island.

05/2016 – 08/2016 Reykjavík, Iceland

UNIVERSITY RESEARCH ASSISTANT UNIVERSITY OF ICELAND - HÁSKÓLI ÍSLANDS

Research Group: Volcanology

Faculty of Earth Science

Technical collaboration in remote sensing research. Working with the GPS points position taken on the monitoring of the fissural lava eruption of the Bárðarbunga which took place in 2014.

06/2015 – 08/2015 Barcelona, Spain

INTERSHIP LITOCLEAN

Technical collaboration on reports of water soil remediation.

● **EDUCATION AND TRAINING**

15/11/2023 – 21/02/2024 online

POL-INSAR COURSE 6TH European Space Agency (ESA), German Aerospace Centre (DLR), Suported by the German BIOMASS Office

Website <https://eo4society.esa.int/event/6th-edition-of-the-dlr-esa-open-polinsar-training-course/>

01/09/2022 – CURRENT Salzburg, Austria

MSC COPERNICUS MASTER IN DIGITAL EARTH (AWARDED ERASMUS MUNDUS JOIN MASTERS SCOLARSHIP) Paris Lodron Universität Salzburg

Website <https://master-cde.eu/>

11/2019

CAMBRIDGE ENGLISH LEVEL 1 CERTIFICATE IN ESOL INTERNATIONAL (FIRST) LEVEL B2

Cambridge Assessment English

08/2012 – 08/2017 Barcelona, Spain

GEOLOGIST BACHELOR'S DEGREE Universitat de Barcelona

Degree in Geologi interested on Remote Sensing techniques.

Website <https://www.ub.edu/portal/web/ciencias-terra>

2016 Grenoble, France

COURSE IN ORFEO TOOLBOX (OTB) Centre National d'Etudes Spatiales (CNES)

14h

2014 – 2016 Reykjavik, Iceland

ERASMUS Háskóli Íslands

Subjects:

Glacial geology

Magmas in the crust

Application of Remote Sensing in Earth Sciences

Volcanology

2015 Reykjavik, Iceland

COURSE IN DRONE - DJI PHANTOM 3 PROFESSIONAL University of Iceland

14h

2010 Santander, Spain

PARTICIPANT ON OLYMPICS STATEWIDE GEOLOGY AEPECT, Asociación Española para la Enseñanza de las Ciencias de la Tierra

Winning a scholarship to attend the first course of geology at the University of Barcelona.

● **PUBLICATIONS**

2021

'Machine Learning For Mineral Identification And Ore Estimation From Hyperspectral Imagery In Tin-Tungsten Deposits: Simulation Under Indoor Conditions'

Lobo, A.; Garcia, E.; Barroso, G.; Martí, D.; Fernandez-Turiel, J.-L.; Ibáñez-Insa, J. Machine Learning for Mineral Identification and Ore Estimation from Hyperspectral Imagery in Tin-Tungsten Deposits: Simulation under Indoor Conditions. Remote Sens. 2021, 13, 3258. <https://doi.org/10.3390/rs13163258>

● **CONFERENCES AND SEMINARS**

2018 EGU General Assembly

'ASTER satellite imagery for geological exploration in Deception Island (Antarctica)'

Co-author.

2018 IGARS

'Towards Unsupervised Flood mapping generation using automatic thresholding and classification approaches.'

Co-author.

2017 EGU General Assembly

'SINCOHMAP Project: Land-cover and vegetation mapping using very dense multi-temporal InSAR data.'

Oral communicator.

● **LANGUAGE SKILLS**

Mother tongue(s): **CATALAN** | **SPANISH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	B2
FRENCH	A2	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Basic: AutoCAD, Ineskiye | Basic: Global mapper, Georient | Basic: Microsoft Word, Excel, Powerpoint | Basic: R studio | Basic: Surfer, GeoDa, Sterionet | Basic: Microstation, Petrel E&P, Kingdom Suite | Basic: Autodesk 123D Catch | Advanced: Qgis, ArcGIS, ENVI, Orfeo ToolBox (OTB), EnMAP, SNAP | Advanced: Google Earth | GIT Hub | Microsoft Office Word Power Point Excel

● **SKILLS, INTERESTS & EXTRACURRICULAR ACTIVITIES**

Driving license (B1)

Intereses individuales

Deportes y actividades al aire libre, alpinista y escaladora. Campeona de España de Tiro Olímpico a nivel Junior. Enamorada de la danza clásica con el nivel Intermediate de balet de la Royal Academy of Dance. Viajera, cocinera y activista ambiental.

2018 – CURRENT

Volunteer in mountaineering club CEC Centre Excursionista de Catalunya

Organizing activities through nature. Motivating youth to involve themselves in natural environments and spread consciousness about anthropogenic effects in the mountain.

2014

Recreational leader certificate, Girona

2012 – 2014

Scout leader at Agrupament Escolta i Guia Jaume Ortiz, Badalona

2008 – 2013

Scout leader at Agrupament Escolta Maristes Girona, Girona

References

Agustin Lobo (Scientist - Geociències Barcelona (GEO3BCN - CSIC)) Agustin.Lobo@geo3bcn.csic.es, Javier Duro (CEO - DARES TECHNOLOGY) jduro@dares.tech, David Martí (Co-founder Lithica) dmarti@lithica.net, Nuria Devanthery (InSAR Technical Manager - Sixense Satellite) nuria.devanthery@sixense-group.com. Dr. Daniel Hölbling (Head of Risk, Hazard & Climate Research Group) daniel.hoelbling@plus.ac.at