Julián Cabezas

MASTER OF DATA SCIENCE STUDENT

Chilean, Residence in Adelaide, Australia

☐ 0484190364 | ✉ juliancabezas@gmail.com | ⌂ juliancabezas.com | ◉ juliancabezas | in juliancabezas

Data science, GIS, R and Python Programming

Education

University of Chile	*Santiago, Chile*
RENEWABLE NATURAL RESOURCES ENGINEER - BACHELOR OF SCIENCE IN RENEWABLE NATURAL RESOURCES	*2010-2015*
University of Adelaide	*Adelaide, Australia*
MASTER OF DATA SCIENCE (CURRENT STUDENT)	*2020-2021*

Skills

- Development and implementation of spatial and statistic data analysis algorithms.
- Implementation of machine learning algorithms.
- Advanced R and Python programming skills.
- Basic Java, SQL and Git skills.
- Intermediate-advanced skills in GIS and remote sensing software: ArcGIS 10.4, ENVI 5.1 and QGIS.
- UAV Driving and data processing
- Chilean driver license (Class B, valid in Australia).

LANGUAGES:

- Spanish as native language
- Advanced level of English (score 7.5/9 in academic IELTS).
- Basic level of German (A1, certified at KIT, Germany).

Professional Experience

The Mullion Group	*Canberra, Australia*
CASUAL CONSULTANT	*2020*

- Developing of a proof of concept of the implementation of the Generic Carbon Budget Model (GCBM) for forest carbon modelling

Food and Agriculture Organization of the United Nations (FAO)	*Santiago, Chile*
NATIONAL PROJECT PERSONNEL, REDD+ PROJECT	*2019*

- Support for the Monitoring and Measurement System of the National Strategy of Climate Change and Vegetation Resources. REDD+ Technical Annex elaboration and reviewing process

R&D Department - National Institute of Statistics	*Santiago, Chile*
STATISTICAL ANALYST	*2018 - 2019*

- Development of statistic analysis algorithms, including text mining algorithms for automatic classification of labor sector in national surveys

Karlsruhe Institute of Technology (KIT)	*Karlsruhe, Germany*
REMOTE SENSING SCIENTIST	*2016 - 2017*

- Implementation of disturbance detection algorithms using R and Landsat data (SaMovar Project)

University of Chile	*Santiago, Chile*
GIS ASSISTANT	*2015*

- GIS elaborations and spatial analysis in the Study for the definition of protection areas in the east piedmont of Santiago project, financed by the United Nations Development Programme (UNDP)

Scientific Publications

INTERNATIONAL JOURNALS

- **Cabezas**, J., Galleguillos M. & J. Pérez-Quezada. (2016). A method to predict vascular plant richness in a heterogeneous wetland using spectral and textural features and a random forest algorithm. IEEE Geoscience and

Remote Sensing Letters 13(5): 646-650.

- **Cabezas**, J., Galleguillos, M., Valdés, A., Fuentes, J.P., Pérez, C. & J. Pérez-Quezada. (2015). Impacts of management on vegetation and carbon stocks in an anthropogenic peatland using field and remote sensing data. Ecosphere 6(12): 282.
- Pérez-Quezada, J. F., Brito, C. E., **Cabezas**, J., Galleguillos, M., Fuentes, J. P., Bown, H. E., & Franck, N. (2016). How many measurements are needed to estimate accurate daily and annual soil respiration fluxes? Analysis using data from a temperate rainforest. Biogeosciences, 13(24), 6599.

Book Chapters

- Pérez-Quezada J., Astorga B., **Cabezas** J., Labra F. & Rovira J. Ecologic Planning of the territory applied in the piedmont of Santiago. (2018) In: Pérez-Quezada J. y Rodrigo P. (Eds.) Applied methodologies for the conservation of the biodiverity of Chile. Environmental Sciences Series N°1. Faculty of Agricultural Sciences, University of Chile, Santiago: 379-411 (Original in Spanish)

Presentations in scientific congresses

- **Cabezas**, J & F. Fassnacht (2018). Reconstructing the vegetation disturbance history of a biodiversity hotspot in central Chile using Landsat, BFAST and Landtrendr. International Geoscience and Remote Sensing Symposium (IGARS). Valencia, España, 22-27 July 2018.
- Labra, C., **Cabezas**, J. & C. Little. Delimitation of protection areas for water courses using hidrological modelling tools (2018). Joint conference on Forest and Water. Valdivia, Chile, 5-9 November 2018. (Original in Spanish)
- **Cabezas**, J., Fassnacht, F., Schmidt, T., Kleinschmit, B. & M. Foester. (2016) Satellite-based monitoring of invasive species in central-Chile: Detection of disturbances using Landsat time series. Presentation in the ForestSat 2016 congress. Santiago, Chile. 14-18 November 2016.
- **Cabezas**, J., Fassnacht, F., Schmidt, T., Kleinschmit, B. & M. Foester. (2016) Relating the disturbance history of natural vegetation in central Chile with the spread of three invasive species. Poster presented in "GEO BON Open Science Conference & All Hands Meeting 2016." Leipzig, Germany. 4-8 de July 2016.
- **Cabezas**, J., Galleguillos M. & J. Pérez-Quezada. (2015). Prediction of the richness of vascular plants in a wetland of the Chiloe Island using remote sensing textural variables. Poster presented in the IV Congress of Native Flora, Concepción, Chile. 14-17 October 2015. (Original in Spanish)
- Pérez-Quezada, J., Brito, C., **Cabezas**, J., Salvo, P., Lemunao, P. Flores, E., Valdés, A., Fuentes, J.P., Galleguillos, M. & C. Pérez. (2015). Carbon stocks of an old-growth forest and an anthropogenic peatland in southern Chile. Poster presented in EGU 2015. Vienna, Austria. 12-17 April 2015.

Consultancy

- **2017**: Report elaboration and participation as expert witness in the case D-33-2017 of the environment court of Santiago. with the report "Spatio-temporal analysis of causality and spatial extent of the Nilahue Barahona fire in January 2017."
- **2017**: Report for the Forest Institute of Chile (INFOR): "Delineation and classification of water courses in forest basins in southern Chile: Analysis using remote sensing techniques" (forest and water research line)
- **2014**: GIS advisor: Diagnosis of the agricultural and soil system of the area of influence of the Carén reservoir. Ambiente Seguro-CODELCO El Teniente. Mapping and analysis of land uses.

References

- Dr. Fabian Fassnacht. Post-Doc Position. Institut für Geographie und Geoökologie, (Karlsruher Institut für Technologie, KIT). e-mail: `fabian.fassnacht@kit.edu`
- Dr. Jorge Pérez Quezada, Associate Professor. Faculty of Agricultural Sciences (University of Chile). e-mail: `jorgepq@uchile.cl`