

# Andres Hernandez-Camacho, Senior Data Scientist

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## LINKS

[LinkedIn](#), [Publications](#), [Blogs](#), [Github](#)

## PROFILE

Senior Data Scientist with 13+ years of experience bridging the gap between advanced research and production-scale engineering. PhD in Geoinformatics with **181+ citations** and high-impact publications in ***JAMA Network Open*** and ***PLOS ONE***. My research has been recognized by the **World Health Organization (WHO)** and featured in U.S. News & World Report.

A "full-stack" scientist-engineer who designs complex spatiotemporal ML models and deploys them as scalable, cloud-native services (GCP, Kubernetes, Docker). Proven leader and product owner who managed government-level stakeholders and launched a national health-tech application to **20,000+ users** in 3 months.

## TECHNICAL SKILLS

- **Data Science & ML:** Python (Scikit-learn, Pandas, GeoPandas), R, Spatiotemporal Statistics (Bayesian BYM, GAMs, Kriging), Machine Learning (Random Forest, Mixed-Effect Models), Geospatial Analysis (GDAL, STAC), NLP
- **Engineering & Cloud:** Google Cloud Platform (GCP), AWS, Azure, Kubernetes, Docker, Python (FastAPI), CI/CD (GitLab CI, Azure Repos), ETL Architecture
- **Tools & Databases:** SQL, ArcGIS Pro (.NET SDK), Git, Data Visualization (Looker, etc.), Monitoring (Datadog/Grafana)

## EXPERIENCE

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| Mar 2022 — Present  | Senior data engineer, UP42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Berlin, Germany        |
|                     | <ul style="list-style-type: none"><li>• <b>Owned and led the open-source Python SDK (up42-py)</b> for 1.5 years, driving its adoption to <b>56,000+ downloads</b> (Anaconda) and serving as the top committer to ship all core features.</li><li>• <b>Single-handedly designed, built, and shipped the UP42 ArcGIS Pro Add-in.</b> Engineered the full-stack product to integrate the entire platform's commercial marketplace (search, AOI selection, purchase) directly into the Esri ecosystem. Selected to present the product's architecture and technical challenges at the <b>2022 Esri European Developer Summit</b>.</li><li>• <b>Engineered a novel Vexcel oblique imagery data product PoC</b>, creating a new backend process (GCP, Kubernetes) to automate 3D reconstruction workflows—a capability the provider's API did not offer. More than 10k euros sold in 9 months.</li></ul> |                        |
| Jun 2021 — Mar 2022 | Data & DevOps Consultant, Alten Netherlands (at Aegon/TransAmerica)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The Hague, Netherlands |
|                     | <ul style="list-style-type: none"><li>• Architected and executed the migration of all non-production CI/CD test pipelines from Azure to AWS, <b>decoupling testing from production environments</b>.</li><li>• This initiative <b>resolved critical platform stability issues, eliminated resource contention, and freed up an estimated 30% of production cluster resources</b>.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        |
| Aug 2020 — Jun 2021 | Geospatial Data scientist, University of Twente                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Enschede, Netherlands  |
|                     | <ul style="list-style-type: none"><li>• <b>Operationalized a PhD-level spatiotemporal model (Random Forest)</b> to create a production-ready forecast of tick-borne disease risk for the public-facing "Tekensignalering" warning app.</li><li>• Engineered the complete data pipeline, performing advanced geospatial interpolation (Kriging, Spline) to create continuous climatic raster surfaces from sparse weather station data.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |
| Aug 2017 — Aug 2020 | Doctoral researcher, University of Cincinnati                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Cincinnati, OH, USA    |
|                     | <ul style="list-style-type: none"><li>• Authored/co-authored <b>4+ first-author papers</b> in high-impact journals, including <i><b>JAMA Network Open</b></i> and <i><b>PLOS ONE</b></i>, resulting in <b>181+ career citations</b>.</li><li>• Research identifying opioid "hotspots" and substance use disorder trends was featured in <b>U.S. News &amp; World Report, ScienceDaily, and MedicalXpress</b>.</li><li>• Awarded the <b>Robert Bruce McNee Award (2019)</b> for "outstanding academic achievement and research contributions".</li><li>• Developed novel spatiotemporal statistical models to merge remote sensing data with terrestrial health metrics, analyzing drivers of epidemics and the opioid crisis.</li></ul>                                                                                                                                                            |                        |

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| Apr 2015 — Aug 2017 | Head of ITC and Health program, Ministry of ITC - Republic of Colombia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Bogota D.C., Colombia |
|                     | <ul style="list-style-type: none"> <li>• <b>Conceived and led the 'ClicSalud' national health-tech program</b> from concept to public launch, acquiring <b>20,000+ users in the first 3 months</b>.</li> <li>• Managed the full product lifecycle, delivering a platform for medication price transparency and public reporting on healthcare provider (EPS) quality.</li> <li>• <b>Served as the primary strategic liaison</b> between the Ministry of ICT, Ministry of Health, and the Presidency, translating high-level policy goals into actionable technology projects.</li> <li>• <b>Acted as the national spokesperson</b> for health-tech, presenting strategy to audiences of <b>1,000+ people</b>, appearing on national TV, and co-authoring the national plan for telemedicine and EHR interoperability.</li> </ul> |                       |
| Aug 2012 — Dec 2014 | Researcher, University of Pittsburgh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Pittsburgh, PA, USA   |
|                     | <ul style="list-style-type: none"> <li>• Contributed to a U.S. National Institutes of Health (NIH)-funded project on global health informatics.</li> <li>• Co-authored a <b>peer-reviewed paper (JMIR)</b> on a feasibility study for an <b>Artificial Intelligence (AI)</b> system to extract drug-drug interactions (DDI) from unstructured FDA product labels .</li> <li>• This role was a direct continuation of my Master's thesis, which focused on designing an NLP system to support DDI detection.</li> </ul>                                                                                                                                                                                                                                                                                                           |                       |

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## EDUCATION

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| Aug 2017 — Dec 2020 | Doctor of Philosophy (PhD) in Geoinformatics (GPA: 3.98 / 4.0),<br>University of Cincinnati                | Cincinnati, OH, USA  |
| Aug 2012 — Dec 2014 | Master of Science (MS) in Informatics (GPA: 3.53 / 4.0),<br>University of Pittsburgh                       | Pittsburgh, PA, USA  |
| Aug 2010 — Aug 2011 | Specialist in Project Management (GPA: 92.7 / 100), Universidad EAN                                        | Bogota, Colombia     |
| Feb 2002 — Sep 2009 | B.S. in Electrical and Electronics Engineering (Thesis Grade: 5.0 / 5.0), Pontificia Universidad Javeriana | Bogota D.C. Colombia |

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| LANGUAGES | Spanish | Native speaker | German | B1 |
|           | English | C1             |        |    |