

# Julio E. Herrera Estrada, PhD

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## SUMMARY

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Leading interdisciplinary scientist with an expertise in assessing climate risks using statistical models, and with proficiency in national and international energy and climate policy. Demonstrated success working collaboratively in the private sector leveraging strong interpersonal and communication skills.

## PROFESSIONAL EXPERIENCE

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### Descartes Labs, Inc.

New York, NY

*Applied Scientist*

08/2019 – Present

- Build statistical models from geospatial and time series data (e.g. satellite imagery, climate data).
- Develop solutions to assess corporate sustainability targets emphasizing customer value creation.
- Manage team of three scientists to deliver on a complex project with multiple deliverables, deadlines, and internal stakeholders for a Fortune Global 500 company, engaging in constant client feedback.
- Perform strategic planning to identify growth opportunities around climate risks and sustainability.

### Department of Earth System Science, Stanford University

Stanford, CA

*Postdoctoral Scholar (2017-2019), Stanford Data Science Scholar (2018-2019)*

10/2017 – 08/2019

- Calibrated econometric models to quantify drought risks to the electricity sector in the western U.S.
- Published three original research articles and contributed to two others, focusing on drought and flood risks within the context of a changing climate, and gave eight related academic presentations.
- Selected for the Rising Environmental Leaders Program and attained further insights on policy topics.

### Disaster Risk Management and Urban Development Unit, The World Bank Group

Stanford, CA

*Short-Term Consultant (remote)*

05/2018 – 10/2018

- Advised statistical modeling approach to quantify drought risks to food security using satellite data.
- Wrote three reports to support investments in hydro-meteorological services in West Africa covering the services' ROI, innovative technologies and business models, and the region's climate extremes.

### Department of Civil and Environmental Engineering, Princeton University

Princeton, NJ

*Graduate Researcher*

02/2013 – 09/2017

- Analyzed data from climate and hydrological models using high-performance computing to study present and future climate risks to the water, energy, and agricultural sectors.
- Published two original research articles and contributed to two others, focusing on droughts, heat waves, and climate change, and gave nine related academic presentations.

## SKILLS

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**Computing:** Python, MATLAB, Google Cloud Platform, BigQuery, Unix, Git.

**Statistical Modeling:** Regression analysis, time series analysis, statistical optimization, Bayesian statistics, stochastic simulations, machine learning, geospatial statistics.

**Languages:** Spanish (native), French (limited working proficiency).

## EDUCATION

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**Ph.D.** in Civil and Environmental Engineering, **Princeton University**, Princeton, NJ

11/2017

Graduate Certificate in Science, Technology, and Environmental Policy

*Fellowships and Awards:* NASA Earth and Space Science Fellowship, Wu Graduate Fellowship in Engineering, Graduate Student Leadership Award, AMS Summer Policy Colloquium Travel Award.

*Leadership:* Co-Founder and Editor-in-Chief of online publication Highwire Earth (2015 – 2017), President of the Graduate Student Representatives of the Department of Civil and Environmental Engineering (2014 – 2015), President of the Latino Graduate Student Association (2013 – 2014).

**B.S.** in Applied Mathematics, **Columbia University**, New York, NY

05/2012