# Ariane Ducellier

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## Personal profile

**Applied Scientist Professional** and **PhD holder** with **10+ years'** experience designing **statistical models** and carrying out **scientific research** to solve real world problems. Proven track record in **framing research questions** and **conducting data-driven studies** that lead to practical solutions. I am now looking to leverage my data analysis, project management and cross-functional collaboration skills to **find solutions** that improve business operations.

## Areas of expertise

- Data Analysis
- Risk Analysis
- Project Management
- Cross-functional Collaboration

## Technical skills

Programming Python (pandas, pyspark, scikit-learn, pytorch), R, AWS.

Courses Statistical Machine Learning, Advanced Time Series Analysis, Statistical Inference, Stochastic Modeling, Data Visualization.

## Professional experience

2022–2023 **Applied Scientist**, Zillow, Seattle, WA.
- Developed statistical models and computational codes to forecast housing market trends to ensure audiences have access to the latest data and insights.
- Delivered forecasts to stakeholders on a monthly basis.
- Evaluated and troubleshooted errors on statistical models.
- Created and implemented computational codes for forecasting.
- Analyzed and interpreted available datasets for forecasting.

2016–2022 **Research Assistant**, University of Washington, Seattle, WA.
- Executed research to understand slow earthquake phenomena and subduction zone processes.
- Performed statistical analysis of large seismic datasets and signal processing.
- Prepared and co-taught classes on data science for Earth and planetary systems.
- Ran and taught labs on data science and machine learning.
- Administered a one week long workshop on geospatial data science.

2021 **Applied Scientist Intern**, Zillow, Seattle, WA.
- Pioneered a new forecasting model to predict housing market trends.
- Evaluated and analyzed data of different datasets used for forecasting.
- Presented model results to internal stakeholders.

2006–2015 **Research Scientist**, The French Geological Survey, Orléans, France.
- Developed computational codes to model seismic wave propagation.
- Created a computational code for the vulnerability assessment of utility networks and buildings.
- Leveraged graph models to forecast and mitigate network disruptions following natural disasters.

Fall 2010 and Fall 2011 **Visiting Research Scientist**, Kyoto University, Kyoto, Japan.
- Wrote global optimization codes for highly nonlinear inverse problems resulting in a new, innovative method to model earthquake ground displacement for civil engineering purposes.

## Education

2016–2022 **PhD**, University of Washington, Seattle, WA.

- Earth & Space Sciences and Data Science.
- 3 published articles in prestigious scientific journals within the field of Earth science.
- 3 presentations in high-level international conferences in data science.

2021 **Master of Science**, University of Washington, Seattle, WA.

- Statistics, Advanced Data Analysis.

2001–2004 **Master**, Universite Paris-Saclay, France.

- Executive Engineering and Applied Mathematics.