ClimateCheck™

Job Opening: Flood Modeling Data Scientist

ClimateCheck is hiring a Data Scientist with outstanding analytical, research, and coding skills, along with a strong GIS and statistics background, to work on flood modeling. The role will be part of a passionate team in a startup environment and focus on measuring and modeling climate risk from flood hazards: fluvial, pluvial, storm surge, and tidal. These models will be used to help individuals and organizations make more informed decisions, primarily in a real estate context where climate risk has emerged as a top priority. ClimateCheck helps everyday people and our business partners respond to climate change by democratizing access to property-level climate risk information, integrating climate risk estimates into products and services, and meeting regulatory, investor and stakeholder demands for climate risk management.

We seek a dynamic individual who can manage complex datasets, communicate effectively across a range of disciplines, and bring their flood modeling and climate risk expertise to the real estate context as we develop our information and data offerings in this exciting, cutting edge, and incredibly important area. This person will join and coordinate among a growing team of experts from the climate, natural hazards, and data sciences as well as the real estate industry. If you are a talented, creative, and self-directed scientist with experience estimating climate risk, consider applying to join our team!

Company and Team

ClimateCheck is the definitive climate risk rating product for individual properties and real estate portfolios of any size. For the average home buyer about to make the most important investment of their life, there is a complete lack of easy-to-understand information on climate risk. ClimateCheck bridges this gap by conducting, synthesizing, and distilling complex science to provide simple tools to make climate risk-informed decisions.

Born of university research and real estate industry expertise, ClimateCheck specializes in property-level climate risk decision-making tools: data, analytics, and information. We are science, real estate, and technology veterans with a passion for consumer advocacy and climate change mitigation/adaptation. Our mission is to shift the real estate market's attention to climate risk by democratizing access to complex scientific information. We empower property buyers, owners, and brokers by quantifying and communicating climate risks through our proprietary risk assessment and reporting.

We are a nimble, early stage startup focused on quick expansion into a new, exciting, growing market of consumer and enterprise climate risk data and information. Check us out on ClimateCheck.com!

Position Description

ClimateCheck offers climate risk estimates for multiple hazards: wildfire, drought, extreme heat, heavy precipitation, high winds, and flooding. This position will focus on flood modeling by working directly with scientists at ClimateCheck, universities, and across partner organizations to:

1. Improve the accuracy and spatiotemporal resolution of our current flood models.
2. Ensure adherence to flood event and exposure trends at present and over projected time.
3. Build out capabilities for in-house flood hazard modeling.
4. Develop catastrophe risk methods and models for flood events.
5. Investigate solutions for enhanced extraction, generalization, visualization, modeling, and representation of existing geospatial flood risk data to create new knowledge.
6. Write academic articles to validate and develop our flood hazard and risk models and measurements.

Responsibilities

- Estimate flood hazard across different types (fluvial, pluvial, storm surge, and tidal).

- Build flood risk estimates into usable information products for individuals and organizations, including our internationally renowned website for real estate risk appraisal, ClimateCheck.com
- Provide subject knowledge, data, and methods expertise on property-level flood risk estimation.
- Develop and implement innovative flood risk methods with complex biophysical, geospatial, and socio-environmental models.
- Present our flood risk data products to colleagues, academics, and business partners.
- Evaluate the data accuracy in predicting hazard events, insurance claims, and losses for all types of flooding.
- Understand and implement methods of model validation, bias correction, and quantification of uncertainties.
- Communicate analytical results internally and to scientific advisors.
- Brainstorm and develop products to support our climate risk integration proposition for the real estate industry.
- Co-author publications in scientific peer-viewed academic journals.
- Present research results at professional and scientific venues.

Required Qualifications

- Master's or PhD in a discipline related to flood modeling or climate risk, such as geography, hydrology, GIScience, environmental science, atmospheric science, climatology, statistics, mathematics, physics, or computer science.
- Experience identifying, preparing, and analyzing large, complex spatiotemporal data for flood modeling.
- Strong coding skills in R or Python, particularly for spatiotemporal analysis.
- Excellent oral and written communication skills, specifically an ability to write and present complex science as well as translate scientific information into every-day language for non-technical audiences and mass consumption.
- Motivation for estimating property-level flood risk and applying flood risk expertise to the real estate industry.
- Excitement about using flood risk data to create enterprise- and industry-changing products.

Preferred Qualifications

- A self-starter with great organizational skills and a practical solutions-driven approach.
- Effective at communicating and collaborating in multidisciplinary teams of colleagues and external partners.
- Familiarity with continental-scale modeling and big, high-resolution spatiotemporal data, such as:

    - 2D flood models (fluvial, pluvial, and coastal)
    - Machine learning models for flood prediction
    - Statistical models for climate hazards
    - Downscaled daily climate data
    - Hydrologic and hydraulic data
    - Terrain and land cover data

- Demonstrated capabilities in: hydrology, applied statistics, and/or climate hazards.
- Understanding of the risks faced by individuals and the real estate industry due to climate change and how they can be estimated and integrated into flood risk management.
- Knowledge of real estate regulations in relation to flood risk.

Compensation, Location, and Work Environment

This is a full-time position in our growing company, with the possibility of starting part-time. An entrepreneurial spirit is a must and there is flexibility in terms of work hours and location. It is a casual, fun work environment in a startup where you can be part of bringing some of the most ground-breaking climate risk products to market, alongside a team that's as passionate as you are about this stuff. Salary will be competitive and commensurate with experience. A generous and flexible benefits package will be offered.

Interested?

Interested candidates should send a CV and cover letter to jobs@climatecheck.com. Tell us about yourself and why you would like to work with us! Please include your preferred programming language (R or Python); experience with relevant packages, software, methods, and datasets; and a semi-detailed description of any experience estimating flood and/or other-type climate risk (wildfire, drought, extreme heat, heavy precipitation, high winds, etc.).