

GEOSPATIAL DATA ENGINEER

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Information Technology • Worldwide

This is a hybrid position which requires 8 days/month in any one of our offices in USA, Mexico, Brazil, Colombia, UK, Netherlands, Africa, India, China or Indonesia . Existing work authorization is required at the time of application submission as WRI is unable to sponsor any visa work sponsorship for this position.

About the Program:

The Data Lab is WRI's core data innovation and delivery unit. We are a team of over 35 engineers, product managers, and data scientists with deep experience setting **data strategy**, doing quantitative research, and building data tools and products. We work across WRI's programs, centres, and international offices to use advances in data and technology to help our community improve lives, protect nature, and ensure just transitions. **Data of all kinds** sits at the heart of how WRI achieves impact in the world, and our world-class research is used by governments, policymakers, NGOs and local communities around the world to improve lives, protect nature, and ensure just transitions. The Ross Centre for Sustainable Cities (<https://www.wri.org/cities>) builds on WRI's global and local experience in urban planning and mobility and uses proven solutions and action-oriented tools to make the fast-growing urban environment more resilient to new challenges. The Cities Data team provides cities and local governments with data and tools to support data driven urban planning, addressing different themes: climate risk modeling, population exposure and vulnerability mapping, accessibility to urban services, urban growth, urban heat modeling.

Job Highlight:

Reporting to the Head of Engineering, you will collaborate with data scientists and analysts in the Cities Data team to **develop API services**, **data pipelines**, and other software to conduct **geospatial analysis**, **produce and maintain global and city-level data layers**, generate new spatial and temporal urban indicators, and support the development and deployment of **interactive dashboards** and other visualizations. You will be supported by the Data Lab Engineering Team and Cities Data and Tools team.

What will you do:

Develop Geospatial Tools, Libraries, and Infrastructure (75%):

- **Build reusable tools and libraries** to automate and streamline common data workflows
- Maintain existing codebases and help drive technology choices
- **Develop APIs** to manage and serve diverse geospatial datasets and socio-economic indicators
- **Architect and manage cloud infrastructure** in collaboration with Data Lab DevOps
- **Build data pipelines for processing of geospatial data** using CI/CD practices and preparation for use by data scientists and data products.

Support Data Scientists Workflows and Partners (25%):

- Work with data scientists to automate, optimize and scale geospatial data processing and storage for research products and dashboards
- **Promote good coding practices** across data scientists and engineers and contribute to code reviews
- Be a technical contact for scientists, product managers and users

What will you need:

- **Education:** You have completed a bachelor's degree in a related field
- **Experience:** You have minimum of 5 year of full-time relevant work experience in **programming using Python** or other relevant languages
- **Familiarity with GIS concepts like remote sensing, projections, rasters/vectors and spatial analysis**
- Familiarity with **numerical processing libraries like numpy, scipy and xarray**
- **Experience with cloud compute and storage services**, preferably on AWS
- Ability to **quickly learn new technologies**, architectures, and best practices
- Strong **interpersonal skills and ability to work with teams of individuals and colleagues**
- **Tireless problem-solver;** motivated to contribute to solving today's most pressing environmental and/or international development problems
- Preferred: Familiarity with distributed processing tools like Dask or Spark
- Preferred: **Familiarity with GIS tools like GDAL, rasterio, geopandas,** Google Earth Engine and cloud native geospatial data formats (Cloud-Optimized GeoTIFF, GeoParquet, STAC...)
- Experience working with distributed and international team members
- **Languages:** Proficiency in spoken and written English
- **Requirements:** Existing work authorization is required where this position. WRI is unable to authorize visa work authorization

Potential Salary: Salary range is:**US: 101,000 to 108,000 USD.****UK: 44,000 to 53,000 GBP****Europe: 57,000 to 68,000 GBP**

Salary is commensurate with experience and other compensable factors. WRI offers a competitive remuneration and benefits package.

How to Apply: Please submit a resume with cover letter by the date of 09 April 2024. We are unable to consider your application without a cover letter.

You must apply through the WRI Careers portal to be considered.

What we offer:

- Access to the WRI global network with the opportunity to exchange with and learn from passionate colleagues working at the cutting edge of their fields across Asia, Africa, Europe, Latin America and the US
- The chance to have an impact and to develop your career within a mission driven organization with access to varied learning and training opportunities
- A workplace that strives to put diversity and inclusion at the heart of our work
- The opportunity to join and get involved in different working groups and affinity groups to shape the future of WRI
- Commitment to hybrid working model with flexible working hours
- Generous leave days that increase with tenure

About Us:

Founded in 1982, World Resources Institute (WRI) is an independent, nonprofit global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being. We are working to address seven critical challenges that the world must overcome this decade to secure a sustainable future for people and the planet: climate change, energy, food, forests, water, sustainable cities, and the ocean. WRI has a global staff of over 1,800 people with work spanning 60 countries. We have offices in Africa, Brazil, China, Europe, India, Indonesia, Mexico, Colombia and the United States, as well as a growing presence in other countries and regions.

The foundation of our work is delivering high-quality research, data, maps, and analysis to solve the

world's greatest environment and international development challenges and improve people's lives. We work with leaders in government, business, and civil society to drive ambitious action and create change on the ground. Equally important, we bring together partners to develop breakthrough ideas and scale-up solutions for far-reaching, enduring impact.

Our mission and values:

WRI's mission is to move human society to live in ways that protect Earth's environment and its capacity to provide for the needs and aspirations of current and future generations.

Our values are shared ideals that bind us together: Integrity, Innovation, Urgency, Independence and Respect.

Our culture:

WRI is committed to advancing gender and social equity for human well-being in our mission and applies this principle to our organizational and programmatic practices. We are committed to providing equal opportunities in employment; we embrace all diversity and encourage women, the LGBTQ+ community, persons with disabilities, Afro-descendants, and Indigenous people to apply. Recognizing our strong commitment to gender equality, WRI has also been awarded EDGE certification.

Our team in Human Resources carefully reviews all applications.

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