IIASA

Internship - research data & model code development

The IIASA Energy, Climate, and Environment (ECE) Program is offering this internship for up to six months (minimum duration three months).

BACKGROUND

The IIASA Energy, Climate, and Environment (ECE) Program is one of the leading scientific research institutions in the domain of integrated assessment of climate change and the systems transition to implement the Sustainable Development Goals (SDGs). IIASA has a long-standing tradition in the development of scenarios with strategies for climate mitigation, and has spearheaded discussions on energy access, energy poverty, and sustainable development. This internship is about the intersection between these two streams of work.

The successful candidate will support the development of a new model that links bottom-up energy and resource needs with climate scenarios like those from the IPCC's latest report (*Sixth Assessment Report* "Mitigation of Climate Change 2022", of which the scenario data which is hosted by IIASA in the AR6 Scenario Explorer[1]). The work builds on previous work on Decent Living Standards and Decent Living Energy (e.g. Kikstra et al. 2021, Rao et al. 2019, Rao et al. 2018).

Specifically, this internship will focus on setting up the structure for developing a modular code structure, that follows best practices (open source, with automatic testing and good documentations – see under "Position"), and allows for future expansion of the model. Depending on progress and interests, there is also a possibility to work on data visualization.

An interest in the scientific content of the software tools – climate change and energy transition research – will help communication within the multi-disciplinary teams and develop a deeper understanding of the user needs

[1] https://data.ece.iiasa.ac.at/ar6

THE POSITION

The successful candidate will collaborate closely with researchers in the IIASA ECE Program and particularly closely with Jarmo Kikstra, in addressing the following tasks:

- Assist development of model structure

- Implement modular code structure in R

- Improve data hosting and automate data preparation

- Develop automatic test suite (code and data)

- Software documentation to high professional standards.

Applicants are encouraged to include with their applications evidence of programming, software development and data science skills; and/or of collaboration on multi-developer software projects; for instance, links to a GitHub profile and/or specific projects or pull requests; or references/testimony from collaborators.

QUALIFICATIONS

Applicants should have the willingness and ability to work in an international multi-disciplinary team and be flexible and adaptable in responding to deadlines. Good written and verbal communication skills in English are essential.

Preferably, the successful candidate will be enrolled in a degree program towards an MSc (or equivalent, e.g., DI_{FH}) in a field related to energy economics, environmental science, or computer science and software development, and have a strong interest and experience in programming, software development, and data science.

Necessary skills:

- R – experience with main packages, especially 'tidyverse'.

- General experience with data wrangling.

- Code documentation.

Desirable experience:

- R: package development and testing, e.g. experience with 'testthat', 'pkgdown' and similar.

- Python: general python knowledge and integration tools between python and R.

- Code documentation.

- General experience with data visualization.

- Experience with data acquisition, data licensing and hosting, cleaning, and data imputation.

- Source control: concepts and Git(hub).

APPOINTMENT TERMS:

The selected candidate(s) should be available to take up the internship(s) as soon as possible in 2023. The duration of the appointments can be between three and six months (full or part-time working arrangements are negotiable). This internship will be carried out at the IIASA premises in Laxenburg, Austria.

Please note: Interns at IIASA do not qualify for moving and settlement, or other allowances.

WE OFFER:

A monthly salary based on an annual gross salary of EUR 16,300.00, which is exempt from income tax in Austria.

The advertised salary is:

- Non-negotiable

- Subject to deductions for health insurance and/or social security.

About IIASA

IIASA is committed to a working environment that promotes equality, diversity, tolerance and inclusion within its workforce. This is reflected in our IIASA core values. We encourage qualified candidates from all religious, ethnic, and social backgrounds to apply. In the case that candidates are equally qualified, preference will be given to applicants from countries where IIASA has a Member Organization.

Further Information

For further information about this opportunity/these opportunities, please contact:

Jarmo Kikstra or Keywan Riahi,

For general information about working at IIASA, please contact:

recruitment@iiasa.ac.at

Applications

To apply for this opportunity, you will need to provide the following documents in English:

- **A brief cover letter outlining your motivation for and fit to the position.**

- **Your Curriculum Vitae or Resume.**

- **The names and contact details of two reference givers.**

- **Applicants are encouraged to include with their applications evidence of programming, software development and data science skills; and/or of collaboration on multi-developer software projects; for instance, links to a GitHub profile and/or specific projects or pull requests; or references/testimony from collaborators.**

Deadline for receipt of applications: 7 April 2023

APPLY