

CALL FOR APPLICATION: Internship – Data Science Software Engineer

The African Institute for Mathematical Sciences (AIMS) is Africa's first network of centres of excellence in mathematical sciences, enabling the continent's youth to shape the continent's future through Science, Technology, Engineering and Maths (STEM) education- training Africa's next generation of leaders. AIMS is incubating mathematical sciences to address global challenges, offering a structured Master's in mathematical sciences and focusing on scientific training, cutting-edge research and public engagement.

AIMS South Africa is one of the centres of excellence for training, research and public engagement in Cape Town, South Africa. AIMS South Africa was established in 2003 as a partnership project of the following 6 universities: Cambridge, Cape Town, Oxford, Paris Sud XI, Stellenbosch, and Western Cape.

The Data Science Group of AIMS South Africa is headed by Dr. Bah, the German Research Chair, and based at the AIMS Research Center in Muizenberg, Cape Town. It is a new but rapidly growing research group working on a wide range of exciting Data Science problems including mathematical theory of Data Science, Data Science algorithm/software development; and Data Science applications. We are looking for a software developer passionate about Data Science / Machine Learning / Artificial Intelligence to join the group for an internship of six months (possible extension for another six months upon satisfactory progress) to contribute in the development of open source software packages for some of the algorithms the group is working on.

Duties

- Optimizing an existing Python code for a Deep Learning algorithm
- Modifying algorithm and code to handle different inputs and outputs
- Coding modified algorithm in Python
- Testing code both on a local PC and on a HPC platforms
- Optimize code for Tensorflow, Keras, and Pytorch
- Developing a maintainable, reusable, and well documented code
- Creating both web and graphical interfaces of the algorithm/code
- Repeating the above in another language like R, Matlab, and/or Julia
- Assist the Chair in workshop organization

Requirements

- At least a BSc degree in Data Science, Computer Science, Mathematics, or equivalent technical field
- Coding for data analysis with Python (R, Julia, and Matlab an added advantage)
- Experience contributing a code/package to a programming language
- Deep understanding of recurrent neural networks
- Experience in data analysis with Python (R, Julia, and Matlab an added advantage)
- Ability to manipulate & analyze complex, high-volume, high-dimensional data from varying sources
- Experience with Linux Operating System
- Excellent written and verbal communication skills
- Passionate about empirical research and naturally inquisitive
- Good problem solving and organizational skills
- Must be eligible to work in South Africa

Applications package

- A covering letter motivating the application (please include a statement on citizenship and permission to work in South Africa, and earliest date of commencement)
- A comprehensive CV indicating your programming experience
- One reference letter highlighting your coding experience to be submitted by the letter writer



AIMS

African Institute for
Mathematical Sciences
SOUTH AFRICA

data science group

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Salary is negotiable and favorably market related.

Send completed applications to Ms Joan Africa-Brown at joan@aims.ac.za

Send subject related questions to Dr. Bubacarr Bah at bubacarr@aims.ac.za

Deadline for applications: **March 31, 2019**

DISCLAIMER:

AIMS – South Africa reserves the right to disqualify ineligible, incomplete and/or inappropriate applications. AIMS also reserves the right not to make an appointment to the position as advertised or to extend the deadline for applications. Only successful applicants will be contacted.

AIMS will consider all applications in terms of its Employment Equity Plan, which acknowledges the need to diversify the demographic composition of the staff corps, especially with regard to the appointment of suitable candidates from the designated groups.

AIMS South Africa Council

Cheryl de la Rey (University of Pretoria), Barry Green (AIMS), Thandi Mgwebi (Tshwane University of Technology), Stéphane Ouvre (University of Paris-Sud-XI), Daya Reddy (Chair, University of Cape Town), Balazs Szendroi (University of Oxford), Neil Turok (Perimeter Institute), Louise Warnich (Stellenbosch University), Grae Worster (University of Cambridge)