## Research Assistant (Contract) – 3 Posts

## The project on "Artificial Intelligence framework for threat assessment and containment for COVID-19", University of Peradeniya

**Salary:** Rs. 100,000.00 per month
**Contract Type:** The post is full time, available immediately and is fixed term initially for 6 months with a high possibility of extending up to 1 year

We seek to recruit highly motivated, enthusiastic, energetic, and dynamic Research Assistants with proven intellectual and technical ability to conduct independent research activities. Having postgraduate qualification and training experience will be an advantage. Please apply with your CV and an additional document highlighting expertise, competence, skills, and research experience listed for your post.

**You may email your application to Prof. J.B. Ekanayake (ekanayakej@eng.pdn.ac.lk).**

**Closing date of this call is 15/02/2021, 5 pm**

**The scope of Work:**
A team of researchers from the University of Peradeniya and Institute of Policy Studies won a research grant from the International Development Research Centre of Canada. The main objectives of this research grant are:

    A. Development and use of artificial intelligence (AI) techniques to detect, model, and predict the behaviour of women, children, and underprivileged groups under COVID-19 pandemic containment strategies.

    B. Understanding of the impact of these strategies initiated in Sri Lanka.

    C. Development of AI based solutions, to predict and manage a future spread of COVID or similar infectious disease outbreaks.

There are three RA posts and specific roles expected and qualification required are specified in the table below. Even though some of the specific tasks are divided among RAs, please note that there are overlaps and you may be asked to perform other duties occasionally which are not included above, but which will be consistent with the role.

| Post | Main duties | Essential skills and Qualifications |
|---|---|---|
| 1 | <ul><li>To prepare quantitative and qualitative data analysis tools and undertake required surveys to collect data based on age, gender, ethnicity, differently abled, and other socio-economic divisions</li><li>To analyse data to identify barriers, stigma and discrimination of women, children, and underprivileged groups from COVID 19 pandemic containment strategies</li><li>To assist with the preparation of progress reports on research for funding bodies as required.</li><li>To liaise as required with relevant stakeholders on matters relating to the research programme.</li></ul> | Prior experience in data collection and data analysis in research projects<br><br>Experience in using statistical packages like STATA and SPSS<br><br>BA: Social Science, BCoM, BSc, BEd |

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| | • To assist conducting different meetings and workshops as specified in the research proposal. | |
| 2 | • To collect and use data related to COVID-19 infection, deaths, and interventions followed by data "cleaning up", "validation", recognition of missing/partial data for identifying measures for prediction of future epidemics.<br>• To evaluate and compare the threat level assessment and socio-economic impact on identified diverse groups under different containment strategies with and without AI assistance<br>• To liaise as required with relevant stakeholders on matters relating to the research programme.<br>• To maintain the computer system used for processing of the AI modules. | Experience of techniques of Artificial Intelligence and allied fields<br><br>Prior experience in data collection and data analysis in research projects<br><br>BSc Engineering, Computer Science or allied fields |
| 3 | • To create specialized AI modules for each pre-labelled study population (by occupation and identified diverse groups) which generate behavioural trajectories from past and present data under multiple containment strategies<br>• To create more diversity aware clusters and AI modules to enable more precise susceptibility assessment based on demographic labels.<br>• To develop AIs to conduct contact tracing and socio-economic impact mitigation actions in a more informed, socially conscious and responsible manner for future COVID-19 infections and future infectious disease epidemics. | Experience of techniques of Artificial Intelligence and allied fields<br><br>BSc Engineering, Computer Science or allied fields |

Other common Expertise/Competence/Skills required:

- Excellent written and verbal communication skills
- Experienced at working in a collaborative and productive research environment
- Demonstrated contribution to publications or reports
- Demonstrated commitment to high quality research

Some of the other duties expected:

- To prepare and present findings of research activity to colleagues for review purposes.
- To prepare publications and research presentations with guidance and advice.
- To attend and present research at groups, meetings and conferences as appropriate.
- To help the research team in the project management activities
- To carry out any other duties as are within the scope, spirit and purpose of the job as requested by the Principal Investigator.

For informal enquiries about the post, please contact Prof. J.B. Ekanayake (ekanayakej@eng.pdn.ac.lk).