CENTRE FOR ADVANCES IN RELIABILITY AND SAFETY LIMITED

Centre for Advances in Reliability and Safety Limited (CAiRS), initiated by The Hong Kong Polytechnic University, is established in 2020 with its operation located in the Hong Kong Science Park, New Territories, Hong Kong. The mission of CAiRS is to bridge academic and industrial counterparts to introduce and implement artificial intelligence methods and prognostic techniques to advance reliability and safety. The goal of the Centre is to improve reliability and safety of critical components and devices, products, systems and sub-systems designed, commissioned and/or manufactured by Hong Kong companies and enterprises. More information about the company can be found at http://www.cairs.hk.

(1) Postdoctoral Fellow – Computer Vision (Ref. No.: CAiRS-R17/P1.1 - Informative feature discovery and selection)
   Postdoctoral Fellow – Computer Vision (Ref. No.: CAiRS-R17/P1.2 - Early detection of degradation in electronic interconnects)
   Postdoctoral Fellow – Computer Vision (Ref. No.: CAiRS-R17/P1.3 - Anomaly detection for systems under indeterminate operating conditions)
   [Appointment period: thirty-six months]

(2) Research Associate – Computer Vision (Ref. No.: CAiRS-R18/P1.1 - Informative feature discovery and selection)
   Research Associate – Computer Vision (Ref. No.: CAiRS-R18/P1.2 - Early detection of degradation in electronic interconnects)
   Research Associate – Computer Vision (Ref. No.: CAiRS-R18/P1.3 - Anomaly detection for systems under indeterminate operating conditions)
   [Appointment period: thirty-six months]

Duties

The appointees will assist the Project Leaders and Programme Manager in the development of machine-learning-based anomaly detection algorithms and surveillance systems for health monitoring of modern electronic systems.

For the post of **Postdoctoral Fellow**, the appointee will be required to:

(a) prepare literature review on machine vision methods on the anomaly detection of electronic assemblies;
(b) design required machine vision systems as required in the health monitoring of modern electronic systems;
(c) develop machine vision and learning algorithms for the anomaly detection and surveillance on the health of different components mounted on the electronic assemblies;
(d) prepare and publish relevant research papers in high-tier peer-reviewed journals; and
(e) perform any other duties as assigned by the Centre Director or his delegates.

For the post of **Research Associate**, the appointee will be required to:

(a) conduct literature search on the machine vision methods on the anomaly detection of electronic assemblies;
(b) set up required machine vision systems as required in health monitoring of electronic systems;
(c) study machine vision and learning algorithms for the anomaly detection and surveillance on health of different components mounted on the electronic assemblies; and
(d) prepare relevant technical reports.
(e) perform any other duties as assigned by the Centre Director or his delegates.

Qualifications

Applicants for the post of **Postdoctoral Fellow** should have a doctoral degree in Electrical/Electronic Engineering, or an equivalent qualification in a related field. They should have a good publication record.

Applicants for the post of **Research Associate** should have a master's degree in Electrical/Electronic Engineering or a related field.

For both posts, applicants should also have/be:

(a) Good understanding of computer vision, pattern recognition and machine learning.

(b) Experience in algorithm development and implementation.

(c) Proficient in programming languages including Python, C/C++.

(d) Familiar with deep learning frameworks such as Tensorflow or Caffe.

(e) Good interpersonal and communication skills; and a good command of written and spoken English.

Fresh graduates are welcome.

Applicants are invited to contact Prof. Lam Kin-man Kenneth at email kin.man.lam@polyu.edu.hk for further information.

Remuneration

A highly competitive remuneration package will be offered. Applicants should state their current and expected salary in the application.

Application

Please send a completed application form, together with a detailed curriculum vitae via email to careers@cairs.hk

Feb 2022

Deadline for application: Recruitment will continue until the position is filled.