Background

Dublin City University (www.dcu.ie) is a research intensive, globally engaged, dynamic institution which has developed its own research specialists, established internationally recognized centres of excellence that have substantive collaborative links with leading universities and industrial partners. DCU is distinguished both by the quality and impact of its graduates and by its focus on the translation of knowledge into societal and economic benefit. Through its mission to transform lives and societies through education, research and innovation DCU acts as an agent of social, cultural and economic progress. DCU is Ireland’s fastest growing university and now hosts more than 17,000 students across its three academic campuses: DCU Glasnevin Campus, DCU St Patrick’s Campus and CU All hallows campus. DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

Insight SFI Research Centre for Data Analytics (http://www.Insight-centre.org) is an SFI funded Research Centre which brings together researchers from University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions, Trinity College Dublin (TCD), University of Limerick (UL), National University of Ireland, Maynooth (MU) and Tyndall National Institute. It creates a critical mass of more than 400 researchers from Ireland’s leading ICT clusters to carry out research on a new generation of data analytics technologies in a number of key application domain areas, such as Health and Human Performance, Smart Communities, Internet of Things, Enterprise and Services and Sustainability and Operations.

The €150m Centre is funded by Science Foundation Ireland and a wide range of industry and European Union partners. Insight’s research focus encompasses a broad range of data analytics technologies from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. Together, with more than 220 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

The Project

Work as part of a small team to research, design and test an embedded intelligent anomaly detection system. Set up a testbed LPWAN network for the local area. There will be Specific
focus on low level languages to make as lightweight as possible and the ability to work with multiple development environments such as Arduino or Pyconn.

**Principal Duties and Responsibilities**

- Work with the team on the algorithms needed to be embedded.
- Set up and test the hardware for a LPWAN network.
- Develop IOT systems to capture data from a range of sensors.
- Embed the algorithms developed by the team onto chips.
  Set up trial cases.

**Qualifications, Skills and Experience Required**

The ideal candidate must have a degree in an appropriate area or equivalent (NFQ Level 7 and 4 years’ appropriate experience). Typically, an honours BSc in Computer Science, Software Engineering or a related discipline with strong software and programming skills and relevant experience in web application development with substantial backend integrations is expected. Candidates should be able to present a portfolio of projects and demonstrate evidence of a willingness to lead projects.

In addition the successful candidate will ideally have;

- Excellent written and verbal communication and interpersonal skills.
- Proven ability to prioritize workload and work to strict deadlines.
- Ability to work in a team and to take responsibility to contribute to the overall success of the team.
- Strong problem solving abilities.
- Python / Micropython experience.
- C programming.
- Lora / LoraWAN familiarity.
- Work well in a group or alone.

**Mandatory Training**

The post holder will be required to undertake the following mandatory compliance training: Orientation, Health and Safety and Intellectual Property and Data Protection training. Other training may need to be undertaken when required.