POSITION DESCRIPTION

Research Software Engineer

September 2024

UNIVERSITY of TASMANIA

Position Summary

College / Division	College of Sciences and Engineering
School / Section	School of ICT
Location	Hobart
Classification	RA Level 3
Reports to	Project Leader – IoT Ecoustics for Threatened Species Monitoring

Position Overview

The School of ICT offers a Research Software Engineer (RSE) position based at the Sandy Bay campus in Hobart. The successful applicant will work on leading-edge research project co-funded by Forest and Wood Products Australia and industry partners, that will develop and deploy acoustic recognition technologies to low-powered devices in Tasmanian and Victorian forests. These devices will identify key species by sound and transmit their detections over LoRaWAN. The project requires a talented professional with IoT and software development expertise to drive device development, working in conjunction with the broader project team and linked PhD projects.

About the University of Tasmania

Welcome to the University of Tasmania, your island campus 1,270 million years in the making. This is heightened education at a slower pace of life. A place that attracts the highest percentage of scientists per capita in the world. Home to towering temperate rainforests, 60,000 years of human knowledge and underground cultural experiences of legend. Take your time to breathe it all in.

Our journey began in 1890, with a seed of academic excellence sown on our island. We inspire and encourage people to flourish and thrive. Our unique circumstances have made us resilient, transforming us into creative problem solvers. Our success is a testament to our quiet determination and adaptability.

We are more than just a place of learning. We are a catalyst for economic growth, a beacon for literacy, a champion for health and a guardian of our environment. We generate powerful ideas for and from Tasmania. We invite inquiring minds, from near and far, to join us in our pursuit of the extraordinary.

Accountabilities and outcomes

Purpose

The role will work on leading-edge research project co-funded by Forest and Wood Products Australia and industry partners to support the development and deployment of acoustic recognition technologies on low-powered devices in Tasmanian and Victorian forests. These devices will identify key species by sound and transmit their detections over LoRaWAN. The project requires a talented professional with IoT and software development expertise to drive device development, working in conjunction with the broader project team and linked PhD projects.

Key Outcomes

- design and assembly of prototype devices from off-the-shelf components
- co-designing and implementing onboard software to manage device behaviour and communication over a LoRa network
- documenting device and software
- developing a data dashboard with assistance from project partners

Behavioural Expectations

We aim for everyone to have a positive experience at our university, and all staff contribute toward creating a university culture that is safe and supportive, enabling our community to flourish by:

- Treating all others – staff, students and community with fairness, equity and respect.
- Ensuring the workplace is an inspiring and safe place to be.
- Ensuring the workplace is free from harassment, bullying, victimisation and discrimination.

Success profile

Personal Attributes

- Innovative: Able to produce new ideas and adopt radical solutions. Readily applies theories and concepts to form strategies and navigate future trends.
- Flexible: Has an optimistic approach and readily recovers from setbacks. Embraces change and invites feedback to adapt and improve in the face of new challenges.
- Detail Oriented: Produces high quality work through attention to detail, checking for errors and following procedures to finish tasks within specified timescales.
- Structured: Works methodically to organise and plan tasks, upholds standards and works quickly, able to multi task to produce outcomes.

Role Specific Skills, Knowledge and Experience

Essential

- Experience in design and implementation of IoT devices, including software stacks
- Experience in web development
- Basic knowledge of machine learning
- Demonstrated ability to work in multidisciplinary teams
- Sound communication and interpersonal skills

Desirable

- Experience working in a research setting
- Experience deploying IoT devices in exposed environments

Other Requirements

To be eligible for this position, you are required to hold Australian or New Zealand Citizenship, permanent residence or a valid visa that enables you to fulfil the requirements of this role.

As part of our commitment to a safe and inclusive workplace, employment history and criminal background checks may be conducted as part of the selection process.

Learn more

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