# Research Projects – CSOF6

Role summary for potential applicants

|  |  |
| --- | --- |
| Advertised Job Title**:** | Senior Embedded Engineer |
| Reference Number**:** | 45163 |
| Classification**:** | CSOF6 |
| Salary Range: | AU $109K - $128K plus up to 15.4% superannuation |
| 9Location**:** | Pullenvale, QLD |
| Tenure: | Specified Term of 2.5 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only  Australian Citizens and Permanent Residents Only   * All Candidates   *For Specified Term positions, we will accept applications from Temporary Residents with working rights for the length of the term, who do not require sponsorship.* |
| Functional Area**:** | Research Projects |
| % Client Focus - Internal: | 0% |
| % Client Focus - External: | 100% |
| Reports to the: | Research Team Leader |
| Number of Direct Reports: | 1-2 |

|  |
| --- |
| **Role Overview:** |
| The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational work, and in carrying out the more practical aspects of the work. At senior levels, Research Projects staff may be involved in providing consulting services, science management and/or industry liaison.  The Pervasive Computing team within Data61 has an exciting opportunity for a Senior Software Engineer with strong skills in embedded (microcontroller) programming, and a record of delivering commercial embedded devices. In this position, the successful candidate will manage team members to deliver a close-to-market system of wirelessly networked embedded devices, for low-power tracking of location and activity of animals within an agricultural context. Working within the Distributed Sensing Systems research group and in partnership with the Livestock Phenomics research group and external companies you will contribute your expertise towards impactful research and IT development aimed at reducing the cost and improving the efficiency of commercial livestock management operations. |

|  |
| --- |
| **Duties and Key Result Areas:** |
| * Manage team members to deliver a close-to-market embedded device, including coordination of a project team comprised of hardware engineers, software engineers and researchers. * Lead the design and development of an embedded device for livestock that provides geo location, health management and early warning for biosecurity threats for individual animals. * Lead lab and field-testing activities to ensure the developed hardware and software reaches commercial ready quality and can be used reliably in multi-year deployments. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Work as part of a multi-disciplinary, regionally dispersed research team, to carry out tasks autonomously in support of scientific research. * Work collaboratively with colleagues within your team, the business unit and across CSIRO, to meet objectives. * Set-up and/or maintain effective and efficient work teams, allocate and manage resources and undertake staff performance management and career development. * Choose appropriate management strategies and communication styles to maintain high levels of motivation and productivity, give feedback for development purposes and provide support and direction for improvement, as required. * Adapt and/or develop original experimental methods/equipment/software/concepts/ideas in support of existing and future research. * Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals. * Other duties as directed. |

|  |
| --- |
| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   * **Education/Qualifications:** Relevant Bachelors/Masters Degree &/or equivalent experience in Electrical or Software engineering. * **Communication:** Exceptional communication skills, both written and oral, including the ability to anticipate the interests and knowledge level of an audience and present information and feedback accordingly. * **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment. * **Adaptability:** The ability to effectively manage a number of competing priorities simultaneously, and carry out non-routine tasks independently. * **Problem Solving:** Proven ability to anticipate problems in ambiguous situations, develop appropriate solutions based on thorough evaluation and interpretation, and defend the conclusions with reasoned arguments**.**   ***Essential Criteria:***   1. Demonstrated strong experience with programming of embedded IoT platforms, embedded OS (FreeRTOS or similar), development of low level drivers, and energy-optimized software. 2. Demonstrated experience with low-power wireless network stacks (BLE, 802.15.4, LoRaWAN) 3. Demonstrated experience with linux, UNIX, raspbian 4. A track record of project management and supervising staff to deliver against external project milestones on time and within budget, demonstrated experience with project management tools and software version tracking. 5. Willingness and ability to travel to regional and remote locations 6. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks autonomously in support of scientific research. 7. Demonstrated ability & willingness to contribute novel ideas and approaches in support of scientific investigations. 8. Ability to start immediately if successful   **Desirable Criteria:**   1. Experience with 3D CAD modelling (e.g. Solid works) and PCB layout design (e.g. Altium) 2. Experience with field deployments of wireless sensor platforms 3. Experience with activity sensing on humans or animals, through wearable technology   **Other special requirements:**  Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- <http://www.ielts.org/default.aspx>  ***CSIRO Values:***  As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to Excellent science, Inclusion, trust & respect, Health, safety & environment and Deliver on commitments.  In your application and at interview you will need to demonstrate alignment with these behaviours.  ***Data61 Values:***  **Great Impact**: We focus our valuable resources on areas where we can lead globally and have large impact for Australia, to aid our future prosperity and independence.  **Mastery**: We are fearless, curious and we improve every day. We strive to excel in research, technology and business, and to work with the best in the world.  **Co-Creation of Value**: Everything we do involves co-creation with our network: team, customers and partners. Generously empowering their success is central to our success.  **Ownership of Results**: We jointly hold ourselves accountable for our actions. We do this via trust and commitment.  **People and their Differences**: We embrace the creativity that comes from the diversity of our people.  **Agility and Flexibility**: We view the changing world as an opportunity. This requires agility and flexibility in everything we do; everything changes, except our constant desire to adapt.  **Tell it Straight, with Respect:**We say what we mean, mean what we say, and do not mislead, obfuscate or spin. We're direct and always respectful. |

|  |
| --- |
| **Other Information:** |
| **How to Apply**  Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). You may be asked to provide additional information (online) relevant to the selection criteria. If so, then responding will enhance your application so please take the time to provide relevant succinct answers. Applicants who do not provide the information when requested may not be considered.  If you experience difficulties applying online call 1300 301 509 and someone will be able to assist you. Outside business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.  **Contact:** If after reading the selection documentation you require further information please contact:  Brano Kusy via email: [Brano.Kusy@data61.csiro.au](mailto:Brano.Kusy@data61.csiro.au) or phone: +61 07 3327 4023.  Please do not email your application directly to Brano Kusy. Applications received via this method will not be considered.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  **CSIRO Data61** In today’s data-focused world, there’s no doubt that numbers count. [**Data61**](http://www.data61.csiro.au/) are the largest data innovation group in Australia, a connector that brings together technology innovators, businesses and universities to transform Australian industry and to help solve our greatest challenges. A CSIRO business, we are creating our data-driven future.  **Our commitment to you** We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you. We emphasise an individual’s growth and development which is supported by interacting and learning from world leading scientists and engineers, who provide the opportunity to challenge, transform and innovate new ideas.  CSIRO’s Data61 is committed to sourcing the brightest and best talent to become part of the Data61 family, which contributes to creating Australia’s data driven future. |