Australian National University

Position Description

College/Division:	College of Science
Faculty/School/Centre:	Research School of Physics
Department/Unit:	Materials Physics
Position Title:	Software Engineer
Classification:	ANU Officer 7 (IT)
Position No:	TBC
Responsible to:	Software Engineer
Number of positions that report to this role:	Nil
Delegation(s) Assigned:	Nil

PURPOSE STATEMENT:

The ANU College of Science (CoS) comprises: the Research School of Astronomy and Astrophysics, the Research School of Biology, the Research School of Chemistry, the Research School of Earth Science, the Fenner School of Environment and Society, the Mathematical Sciences Institute, the Research School of Physics and Engineering, and the Centre for the Public Awareness of Science. Staff and students within the ANU College of Science conduct research and delivers a research-led education program that encompasses the entire breadth of the sciences, supported by extensive international networks and by world-class facilities. The College has a strong tradition of research excellence that has fostered distinguished Nobel Laureates and Kyoto Prize winners and that trains scientific leaders in disciplines in which the ANU is consistently ranked in the top twenty in the world.

The Research School of Physics represents Australia's largest university based research and teaching activity in the physics discipline. Hundreds of academics, technical staff and students form the School's greatest asset, its people. This critical mass of researchers is of fundamental importance in fostering the kind of interdisciplinary interactions that create modern research excellence.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

The applicant will be a Software Engineer to develop software tools for the management and analysis of large 3D volumetric images and other data. The successful candidate will be working in a small team comprising experimental and theoretical scientists, research students and software engineers, working on software for data acquisition, management, and analysis. This team works with the X-ray Imaging Science Group that has produced groundbreaking 3D X-ray microscopy technology for over 15 years and formed a highly successful spin-out company.

The applicant will be accountable to a team of software engineers and key research leaders focusing on a number of industry funded projects on geological materials characterization and materials processing. The Engineer will engage with academic and industry partners and support the ongoing industrial R&D programs.

Role Statement:

Under the broad direction of the Lead Software Engineer, the Software Engineer will:

- Provide significant input into the design, evaluation, and implementation of new software in the areas of data acquisition, management, and analysis in line with project requirements of internal and industry funded R&D projects.
- Create and maintain documentation to support image analysis and related software.
- As part of a team, help to maintain software tools, ensuring their suitability for R&D projects' operational requirements, including upgrades and enhancements.
- Train and mentor other members of the team, and staff within the School, broader University and externally.

- Ensure that appropriate coding standards, guidelines and methodologies are adhered to.
- Install, configure and deploy third party software, including web applications.
- Provide advice and technical support through the investigation, resolution and tracking of software issues within current information systems.
- Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.
- Other duties as consistent with the classification of the position and in line with the principles of multi-skilling.
- Take responsibility for their own workplace health and safety and not willfully place at risk the health and safety of another person in the workplace.
- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

SELECTION CRITERIA:

1. A degree in Computer Science or related discipline; or an equivalent combination of experience and education/training.
2. Experience and competence in all or some of the following software languages and tools: Python and C++. Bonus: some experience with web development (predominantly backend).
3. Demonstrated ability and eagerness to learn new programming languages, tools and technologies quickly.
4. Competence in, or some familiarity with software development, scripting, and system administration on Linux.
5. Demonstrated experience in gathering requirements and building software to meet user needs.
6. Demonstrated experience to work independently with minimal supervision, with an ability to understand code written by others quickly and self-sufficiently.
7. Demonstrated ability to work effectively and harmoniously as part of a team, and excellent interpersonal and communication skills to relate effectively and provide guidance to a wide range of people.
8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context

The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position.

Supervisor/Delegate Name:	Professor Mark Knackstedt	**Date:**	August 2024

References:

Professional Staff Classification Descriptors

Academic Minimum Standards

Australian National University

Pre-Employment Work Environment Report

Position Details

College/Div/Centre	**College of Science**	**Dept/School/Section**	**RSPhys**
Position Title	**Software Engineer**	**Classification**	**ANUO7 (IT)**
Position No.	**TBC**	**Reference No.**	**N/A**

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see ' Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	☒	☐	laboratory work	☐	☒
lifting, manual handling	☐	☐	work at heights	☐	☐
repetitive manual tasks	☐	☐	work in confined spaces	☐	☐
Organizing events	☐	☐	noise / vibration	☐	☐
fieldwork & travel	☐	☒	electricity	☐	☒
driving a vehicle	☐	☐			
NON-IONIZING RADIATION			**IONIZING RADIATION**		
solar	☐	☐	gamma, x-rays	☐	☒
ultraviolet	☐	☐	beta particles	☐	☐
infra red	☐	☐	nuclear particles	☐	☐
laser	☐	☒			
radio frequency	☐	☐			
CHEMICALS			**BIOLOGICAL MATERIALS**		
hazardous substances	☐	☐	microbiological materials	☐	☐
allergens	☐	☐	potential biological allergens	☐	☐
cytotoxics	☐	☐	laboratory animals or insects	☐	☐
mutagens/teratogens/ carcinogens	☐	☐	clinical specimens, including blood	☐	☐
pesticides / herbicides	☐	☐	genetically-manipulated specimens	☐	☐
			immunisations	☐	☐

OTHER POTENTIAL HAZARDS (please specify):

Supervisor/Delegate:	Professor Mark Knackstedt	**Date:**	***August 2024***