



THE UNIVERSITY OF  
MELBOURNE

## POSITION DESCRIPTION

Science IT, Science Secretariat  
Faculty of Science

### Software Developer, Research & Teaching Platforms

POSITION NO	0041768
CLASSIFICATION	PSC 6
SALARY	\$77,207 – \$83,573 p.a.
SUPERANNUATION	Employer contribution of 17%
EMPLOYMENT TYPE	Full-time (continuing) position
OTHER BENEFITS	<a href="http://about.unimelb.edu.au/careers/working/benefits">http://about.unimelb.edu.au/careers/working/benefits</a>
CURRENT OCCUPANT	New
HOW TO APPLY	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Dr Uli Felzmann Tel: 03 9035 4598 Email: <a href="mailto:ulif@unimelb.edu.au">ulif@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our websites:

[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)  
[joining.unimelb.edu.au](http://joining.unimelb.edu.au)

## ***Position Summary***

The Software Developer, Research & Teaching Platforms, is responsible for developing and maintaining custom specialised applications, including for web and mobile platforms, used in scientific research and teaching by clients of the Faculty of Science. Those applications may include tools for organising teaching aspects, research data collection as well as data visualisation and data sharing.

### ***1. Selection Criteria***

#### **1.1 ESSENTIAL**

- Tertiary qualification in Information Technology or similar subject (Software Engineering etc) plus subsequent experience in software development; or an equivalent combination of relevant experience and/or education and training.
- Experience in working in a large complex and dynamic service oriented research intensive environment.
- Root cause problem analysis expertise and proven faultfinding experience in a heterogeneous environment.
- Well-developed communication skills together with the demonstrated ability in liaising effectively with people at all levels.
- Demonstrated ability to perform and work both as a part of a team and autonomously.
- Proven ability to develop sustainable software applications using a variety of programming languages such as Perl, PHP, Python, JavaScript and Shell scripting.
- Demonstrated experience in using version control systems, in particular git, and Continuous Integration testing.
- Experience with, deploying and administering different operating systems (Windows, MacOS, Linux).
- Experience with, web server (Apache, Tomcat) and database technologies (Oracle, Postgres, MySQL).
- Experience with identity management (AD).
- Experience with application support and system integration.
- An attention to detail and an aptitude for self-learning.

#### **1.2 DESIRABLE**

- Experience with virtualisation technologies (VMware, OpenStack/CloudStack).
- Experience with configuration management (Puppet).
- Interest in science.
- Passion for open-source.

### ***2. Special Requirements***

- NIL

### ***3. Key Responsibilities***

- Contribute to the development of specialised software solutions required in research and teaching within the Faculty of Science through the entire software development lifecycle (SDLC), including design, implementation, testing, maintenance and support.
- Install, configure, maintain and support application and database servers including virtual machines used in research and teaching.
- Integrate and install specialised off-the-shelf and open-source software packages.
- Liaise with Infrastructure Services teams to deliver specialised computing support used in research and teaching.
- Engage actively with the broader software development community at the University.
- Participate in the planning and support of special events (such as Open Day in case of need).
- Foster the adoption of standards and good practices within the Science IT team.
- Develop and maintain detailed technical documentation.
- Keep up to date with emerging technology trends.
- Promote team work and collaboration within the Science IT team.
- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 6.
- Other duties as directed by the supervisor.

### ***4. Job Complexity, Skills, Knowledge***

#### **4.1 LEVEL OF SUPERVISION / INDEPENDENCE**

The incumbent reports to the Manager, IT Service Delivery, Research and Teaching Platforms and works closely with fellow Science IT team members and the Senior Software Developer in particular on a day-to-day basis, and is expected to show a high level of independence while being expected to consult with other team members before making significant changes to existing applications.

#### **4.2 PROBLEM SOLVING AND JUDGEMENT**

The incumbent requires good problem solving skills to effectively resolve the complex, varied issues that may arise in the diverse computing environment operated by Faculty of Science clients. The incumbent is expected to resolve problems through the application of experience, good judgement and consultation with other team members. The incumbent is expected to demonstrate a 'can do' attitude in problem solving.

#### **4.3 PROFESSIONAL AND ORGANISATIONAL KNOWLEDGE**

The incumbent needs to maintain a good and current knowledge of relevant IT technology. The incumbent will develop a good understanding of the IT needs of the Faculty of Science clients and the services that are offered by Infrastructure Services.

#### 4.4 RESOURCE MANAGEMENT

There are no direct resources allocated to this position.

#### 4.5 BREADTH OF THE POSITION

The incumbent communicates both internally and externally with a wide range of clients from academic and administrative staff, specialists in the research centers, students studying in the Faculty of Science, peers within Infrastructure Services, the Science Secretariat and other professional IT staff within the Faculty of Engineering and the Faculty of Medicine, Dentistry and Health Sciences. The incumbent is expected to establish good working relationships with those stakeholders and clients.

The position requires experience in a wide range of technical and complex tasks, relying on a broad understanding of the Faculty's research and teaching portfolio.

### 5. Other Information

#### 5.1 ORGANISATION UNIT

The Faculty Secretariat is the administrative unit for the Faculty and all its teaching, research and commercial activities. The Secretariat is responsible for the policy development, planning, implementation and ongoing management of Faculty programs.

#### 5.2 FACULTY OF SCIENCE

<http://www.science.unimelb.edu.au>

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia.<sup>1</sup> Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 40,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs and home to numerous Centres.

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<sup>1</sup> Figures from the latest available data for 2015, including published international rankings data.

Science manages more than \$280 million of income per annum, with a staff base in the order of 220 professional staff, and more than 540 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 7,500 undergraduate and graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science) with enrolments of approximately 6,200 students.

The Faculty of Science is a leader in research, contributing approximately \$50 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately \$50 million. The annual income from the endowment supports more than 120 prizes, scholarships and research awards

### 5.3 THE UNIVERSITY OF MELBOURNE

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. With outstanding performance in international rankings, Melbourne is at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked among the world's top universities. Further information about our reputation and global ranking is available at <http://futurestudents.unimelb.edu.au/explore/why-choose-melbourne/reputation-rankings>.

Established in 1853, shortly after the founding of Melbourne, the University is located just a few minutes from the centre of this global city. The main Parkville campus is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide range of knowledge-based industries.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded. Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>.

### 5.4 GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

- Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive contributions to society in research and research training, learning and teaching, and engagement. <http://about.unimelb.edu.au/strategy-and-leadership>
- The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the

University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

- The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy *Research at Melbourne: Ensuring Excellence and Impact to 2025* aspires to a significant advancement in the excellence and impact of its research outputs.

<http://research.unimelb.edu.au/index.html#home>

The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:

**Understanding our place and purpose** – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.

**Fostering health and wellbeing** – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health; on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.

**Supporting sustainability and resilience** – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.

Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of *Research at Melbourne: Ensuring Excellence and Impact to 2025*.

## 5.5 EQUITY AND DIVERSITY

Another key priority for the University is access and equity. The University of Melbourne is strongly committed to an admissions policy that takes the best students, regardless of financial and other disadvantage. An Access, Equity and Diversity Policy Statement, included in the University Plan, reflects this priority.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

## 5.6 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/unisec/governance.html>.

## ***6. Occupational Health and Safety (OHS)***

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<http://safety.unimelb.edu.au/topics/responsibilities/>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.