

Position Description

*School of Rural Health
Faculty of Medicine, Dentistry and Health Sciences
The University of Melbourne*



SENIOR ANALYST / PROGRAMMER

- Position No:** 0021819
- Organisation Unit:** School of Rural Health
- Budget Division:** Faculty of Medicine, Dentistry & Health Sciences
- Classification:** HEW 7
- Salary:** \$65,935 – \$71,373 p.a.
- Superannuation:** Employer superannuation of 17%
- Employment Type:** Full-time (fixed-term) position available until 30 June 2011
- Other Benefits:** www.hr.unimelb.edu.au/careers/info/benefits
- Current Occupant:** Vacant
- How to Apply** To submit your application, you must access the online advertisement at: www.jobs.unimelb.edu.au by using the above position number or title as the keyword in the Job Search screen
- For enquiries only contact:** Dr Douglas Boyle, tel. +61 3 5823 4521, email dboyle@unimelb.edu.au
- (Please do not send your application to this Contact)
- Closing Date:** 6 September 2009

1 Position Summary

The University of Melbourne, School of Rural Health is a leader and innovator in electronic record linkage and data communications for Australian Healthcare. Its generic middleware software (Generic Health Network Information Technology

for the Enterprise – GRHANITE™) is fast becoming established as one of the best and most ethical tools for health surveillance and research data acquisition activities. The installed client base and customer numbers are expected to grow markedly in the next few years.

As the product and user-base extends, we require a Senior Analyst / Programmer based in Shepparton to lead product development, to coordinate the activities of a well established contracted development team in Melbourne and to work with our clients on delivering their information needs. This is a new position and is an opportunity for the right person to lead the development of a state-of-the-art technology as it matures into a comprehensive and respected industry tool.

About GRHANITE:

GRHANITE is generic middleware software. It can connect to most database technologies through its own XML-based interface definition language. This language gives us the flexibility to define and refine data extraction parameters without re-coding. It is unique in Australia in managing patient consent before data is extracted and in its ability to extract data without names and other identifiers and yet still permit linkage between databases with virtually no risk of identity exposure. It employs RSA public/private key and AES encryption technologies and uses Web Services for data communication.

The GRHANITE software suite is written in C#, ASP.NET and SQL Server 2005 with version control managed through Subversion, unit testing through NUnit. Some development work is now subcontracted to the Victorian Partnership for Advanced Computing (VPAC) in Melbourne. The successful candidate will be supported by the system architect Dr Douglas Boyle (Program Manager) and VPAC to develop knowledge of the architecture and code-base of GRHANITE and to adopt responsibilities for coding and code-base management. Further information about GRHANITE can be sourced at www.grhanite.com.

This post carries specific responsibilities to implement two current initiatives using GRHANITE:

University of Melbourne, Centre of Excellence in Rural Sexual Health (CERSH)

CERSH is funded by the Department of Human Services, Victoria and was established in early 2009 to develop and implement successful strategies to improve sexual health in rural Victoria. Based at the School of Rural Health, it aims to increase testing for Chlamydia in at risk groups residing in the Hume region over the next 2 years. GRHANITE is already being utilized for Chlamydia surveillance, but this project aims to further streamline GRHANITE as required and to develop reporting tools (web-based or otherwise) to best support the aims of providing feedback to and raising awareness of General Practitioners (GPs) and other health professionals to Chlamydia testing rates and to prepare the ground for cheap, wide-scale implementation. Apart from software and report development responsibilities, the candidate must offer second-line technical support to the project Technical Support Technician who is responsible for implementation and roll-out.

Queensland Aboriginal and Islander Health Council (QAIHC)

QAIHC is the state peak body representing the Community Controlled Indigenous Health Sector in Queensland. Its membership comprises 21 Community Controlled Health Services (CCHS) located throughout Queensland. Over one year (starting at the time of commencement of this post) QAIHC will be working with the UoM School of Rural Health to develop an on-going audit and research data acquisition infrastructure to support data analysis for service development and research. In support of this project, the successful candidate will be working with QAIHC to ensure the successful establishment of a GRHANITE data repository at QAIHC, to pilot GRHANITE data extractions, and to develop data extraction templates in conjunction with QAIHC researchers. The successful candidate will also be responsible for training QAIHC researchers in defining and developing their data extraction templates and migrating technical support functions to their team. The aim is to give QAIHC the tools and knowledge to be largely autonomous in their use of GRHANITE for audit and research within a year.

An industry salary-matching loading may be offered.

2 Selection Criteria

2.1 Essential

- Substantial proven successful IT development experience *specifically* in object-oriented languages and *at least* two years C# or VB.NET development experience
- Substantial advanced ANSI SQL (or derivative) development experience
- A good Computer Science degree - minimum 3 years. (1 year MSc not sufficient)
- The ability to be innovative and reach technical solutions without supervision
- IT skills in each of the following areas:
 - .NET development, preferably C# (Advanced)
 - Relational database specification, design, normalisation and construction - preferably SQL Server (Advanced)
 - ASP.NET programming (Intermediate)
 - XML, HTML, Javascript and other basic IIS-related web page development (Intermediate)
 - Database architectures / programming (Intermediate)
 - Computer security measures and techniques (Intermediate)

- General skills and personal qualities required include:
 - Discretion and ability to maintain absolute confidentiality
 - Verbal and written communications skills sufficient to interact with staff at all levels in the University
 - Verbal and written communications skills sufficient to interact with customers and to train customers in the use and configuration of GRHANITE technologies
 - Initiative and problem solving skills
 - Attention to detail
 - Good personal organization skills
 - Ability to quickly learn new software applications
 - Initiative, flexibility and the ability to work in a self-directed manner

2.2 Desirable

Candidates with one or more of the following experience and skills will be well considered

- Previous software development team leader experience
- Previous experience of data management in a health environment – ideally GP computer systems
- An understanding of MS-Windows versions and experience in resolving issues around software installation and reliability in Windows environments
- Knowledge of the differences and management of data from different common database architectures: OLEDB, ODBC, Text, Excel, Access, ORACLE, SQL Server
- Experience in report-writing using advanced SQL querying skills and a .NET-compatible or bespoke reporting tool
- .NET code obfuscation
- Good knowledge of IP stacks, DNS, Proxy and firewalls and determining solutions to connectivity issues.
- Web services experience
- Web Site security and securing web servers against external attack

3. Special Requirements

- To sign an agreement regarding the confidentiality of patient and organisation information
- In order to accommodate the inherent requirements of this position, some flexibility of working hours will be required which will include the ability to attend to emergencies outside of normal office hours
- A current drivers license conforming to state legislation is required as travel to locations not easily accessible by public transport will be required

4. Key Responsibilities

- Lead software developer for the GRHANITE software suite
- In conjunction with Program Manager, further the general design and focus of the GRHANITE software suite (systems analysis)
- In conjunction with the Program Manager, review and monitor code security, maintenance, unit testing and QA procedures for GRHANITE
- Manage the development work being undertaken by the Victorian Partnership for Advanced Computing (VPAC) Melbourne
- Work closely with technical support staff to ensure the successful roll-out of GRHANITE
- Tailor GRHANITE to meet the data extraction and reporting requirements of the CERSH project described above. This will include secure web development / reporting development using ASP.NET and or a recognised reporting tool (years 1 and 2)
- Tailor GRHANITE to meet the data extraction requirements of QAIHC (year 1)
- General GRHANITE and web page development as required
- Responsibilities to specific projects utilising GRHANITE may vary in year 2 depending on QAIHC progress or other initiated projects
- To participate in University quality processes
- To adhere to the University of Melbourne's Policy on the Management of Research and Records. (www.unimelb.edu.au/records/pdf/research.pdf)

Occupational Health and Safety (OHS) and Environmental Health and Safety (EHS) Responsibilities

All staff are responsible for the following safe work procedures and instructions:

Employees must:

- cooperate with the University in relation to activities taken by the University to comply with OHS and EHS legislation.
- comply with the OHS and EHS manuals
- adopt work practices that support OHS and EHS programs
- take reasonable care for their own health and safety and the health and safety of other people who may be affected by their conduct in the workplace
- seek guidance for all new or modified work procedures
- ensure that any hazardous conditions, near misses and injuries are reported immediately to the supervisor
- participate in meetings, training and other environment, health and safety activities
- not wilfully place at risk the health or safety of any person in the work place
- not wilfully or recklessly interfere with or misuse anything provided in the interest of environment health and safety or welfare

5 Job Complexity, Skills, Knowledge

5.1 Level of Supervision / Independence

The Senior Analyst / Programmer will be expected to lead all development activity for the GRHANITE software suite. This includes an ability to reach design decisions independently where necessary and to have the skills to develop solutions or find solutions to coding problems using any means at his or her disposal. The Senior Analyst / Programmer will be expected to provide supervision to the VPAC development staff. Full support to achieve this level of autonomy shall be provided by Dr Douglas Boyle. The Senior Analyst / Programmer shall report to Dr Boyle who is the final arbiter in all technical areas including software engineering processes, programming techniques and support procedures.

5.2 Problem Solving and Judgement

Because the project is developing new software tools, the successful candidate must be able to carefully consider complex technical problems and to arrive at efficient, workable solutions. Use of any and all tools to make this possible is a prerequisite (for example, use of reference materials, the internet, word of mouth or discussion with colleagues).

5.3 Professional and Organisational Knowledge

The Senior Analyst / Programmer must have or develop a sound understanding of the operation and application of information technology in ways which meet the business needs of our customers. It is expected that the incumbent will develop a detailed knowledge of the University of Melbourne policies and procedures relating to management of research and records.

5.4 Resource Management

The Senior Analyst / Programmer will be required to assist in the specification of hardware and software as required by the project.

5.5 Breadth of the Position

GRHANITE is at an early post-Beta level of maturity as a software product. There are approximately 30 installed sites with this expected to grow to several hundred in the next two years. Whilst starting small, this project has extensive long-term aspirations. The successful candidate is in a position to prove their software design, development and leadership abilities and to progress in seniority as the system and development team grows and matures.

6 Other Information

6.1 School of Rural Health

The School of Rural Health was established in February 2002. It currently comprises the Department of Rural Health (1998) and the Rural Clinical School (2001). In 2006 the School was restructured as a single department School. The School attracts the majority of its funding from the Commonwealth Department of Health and Ageing through programs aimed at establishing a rural-focused national network of medical and health professional training. The School enables undergraduate health professionals to undertake a significant period of their training in rural environments, and provides rural communities with greater access to teaching and research facilities and greater clinical support.

The School's centre is at Shepparton, in buildings adjacent to the Goulburn Valley Hospital. Facilities include a 116 seat lecture theatre, conference and tutorial rooms, computer laboratory, library, clinical simulation and skills centre, and teaching clinic (in development). The School has other major nodes at Ballarat, working closely with Ballarat Health Services, and at Wangaratta, with North East Health. Students are also placed in smaller towns. New facilities being built as part of the NVRMEN initiative include new lecture and skills centre facilities at nodal sites.

The School's programs include:

Rural Clinical School – one of four University of Melbourne clinical schools developed to teach 25% of medical students for at least 1 year of their clinical training. The RCS takes 55-64 Commonwealth Supported students (CSP) each year. A new program, the Extended Rural Cohort will lead to 30 of those students spend their entire clinical training time at the School from July 2009.

University Department of Rural Health – a multidisciplinary, population health based approach involving partnerships with a range of health providers underlies teaching and research activities. A three-week rural health module is compulsory for all University of Melbourne medical students and student placements are organised for medical and allied health students. The Department assists the LaTrobe University School of Nursing in the delivery of a Bachelor of Nursing Science course in the Shepparton region. Aboriginal health activities are undertaken in partnership with the local Aboriginal community. The University of Ballarat is a partner in the Department's teaching and research programs.

The School of Rural Health is currently establishing a Centre of Excellence in Rural Sexual Health (CERSH) based at the Shepparton Campus.

Website: <http://www.ruralhealth.unimelb.edu.au/>

6.2 Faculty of Medicine, Dentistry & Health Sciences

The Faculty of Medicine, Dentistry & Health Sciences is one of 13 Faculties in the University and comprises eight Schools - Medicine, Dental Science, Physiotherapy, Behavioural Science, Nursing & Social Work, Rural Health, and Population Health, along with the Nossal Institute of Global Health. The School of Medicine consists of twenty-three academic departments along with the Medical Education Unit.

The Faculty has an enviable research record and is one of the University's largest faculties in terms of management of financial resources, employment of academic and professional (general) staff, teaching of undergraduate and postgraduate (including research higher degree) students and the conduct of basic and applied research. The Faculty's 2008 budget earnings are nearly \$400M with at least 50% of this income relating to research activities.

The Faculty has a student teaching load of about 6000 equivalent full-time students including more than 1000 research higher degree students. The Faculty has approximately 1600 staff comprising about 550 professional staff and 1050 research and teaching staff.

Further information about the Faculty is available at <http://www.mdhs.unimelb.edu.au/>.

6.3 The University of Melbourne

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. Melbourne's outstanding performance in international rankings puts it at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked by the THES among the world's top 50 universities.

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 www.hr.unimelb.edu.au/careers.

6.4 Growing Esteem and the Melbourne Model

The Growing Esteem strategy, adopted by the University in December 2005, lays out a ten-year plan to fulfil Melbourne's 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 knowledge transfer. See <http://growingesteem.unimelb.edu.au/>

In 2008, as the cornerstone of Growing Esteem, the University introduced landmark educational reforms known collectively as the Melbourne Model. These reforms were designed to create an outstanding and distinctive Melbourne Experience for all students. The Model 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.

6.5 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.

6.6 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 www.unimelb.edu.au

This position description is approved by:

Occupant: Date:

Supervisor: Date:

Head of Organisation Unit: Date: