

Eastern Health

POSITION DESCRIPTION

Position Title:	Data Engineer - Research
Award Classification:	HS3 or as negotiated depending on experience
Award / Agreement Name:	Victorian Public Health Sector (Health and Allied Services, Managers and Administrative Workers) Single Interest Enterprise Agreement 2021-2025
Position Reports to:	Director of Research and University Relations Chief Information Officer

EASTERN HEALTH – HEALTHIER TOGETHER

Eastern Health is one of Melbourne's largest metropolitan public health services. We provide a comprehensive range of high quality acute, sub-acute, palliative care, mental health, drug and alcohol, residential care, community health and statewide services to people and communities that are diverse in culture, age and socio- economic status, population and healthcare needs



1. POSITION PURPOSE

Based on the funding acquired from Victorian Managed Insurance Authority targeted at reducing the rates of Hospital acquired complications at Eastern Health the role of a data engineer has been deemed necessary to ensure the successful implementation of the projects. The Data Engineer will play a central role in **deploying an automated frailty detection model** into the live clinical environment. This role ensures that high-quality, reliable, secure, and interoperable data pipelines are available to support real-time risk scoring, integration with EMR workflows, operational dashboards, and pilot implementation.

The position will work closely with clinicians, data scientists, EMR teams, and IT to translate the validated research model into a scalable, maintainable, and safe clinical product that enhances decision-making, patient flow, and early identification of at-risk patients.

2. MAJOR DUTIES AND/OR RESPONSIBILITIES

A. Data Pipeline Development & Model Deployment

- Design, build, and test **real-time or near-real-time data pipelines** to support the frailty detection model.
- Operationalise model scoring pipelines (batch and/or event-driven).
- Ensure reproducibility, version control, and robust CI/CD processes.
- Deploy and maintain containerised model services (e.g., Docker, Kubernetes, serverless environments).

B. Systems Integration

- Integrate frailty risk outputs into clinical systems including:
 - EMR (Cerner, or relevant local platform)
 - Clinical dashboards
 - Alerts, flags, and workflow tools
- Work closely with Integration teams using HL7, FHIR, APIs, SQL/ODS interfaces, and middleware.

C. Data Quality, Governance & Security

- Implement data validation, cleansing, and data quality monitoring processes.
- Apply health data privacy protocols and governance requirements (ISO27001, National Statement, local digital governance frameworks).
- Manage secure data flows between operational, staging, and analytics environments.

D. Monitoring, Reliability & Support

- Build model performance and system monitoring dashboards (e.g., Power BI, Grafana, ELK).
- Implement logging, alerting, and automated failover mechanisms.
- Triaging and troubleshooting of production data pipeline issues.
- Ensure uptime and service reliability across clinical operational hours.

E. Collaboration & Stakeholder Engagement

- Partner with:
 - Data Scientists / Machine Learning Engineers
 - Clinical Informatics
 - EMR build teams
 - Quality & Safety
 - ICT Infrastructure
- Translate technical requirements into operational processes understandable to clinicians.
- Contribute to user testing, workflow design, and pilot deployment evaluations.

F. Documentation & Continuous Improvement

- Maintain technical architecture diagrams, data dictionaries, API specifications, and pipeline runbooks.

- Support iterative improvements based on end-user feedback, model drift findings, and implementation learnings.
- Contribute to sustainability and scale-up planning.

3. SAFE PRACTICE AND ENVIRONMENT

Occupational Health and Safety

Eastern Health is committed to providing and maintaining a working environment for all staff that is safe and without risk to health. All staff are to take care of their own health and safety and the health and safety of any other person who may be affected by your acts or omissions at the workplace. Understand responsibilities and accountabilities to yourself and others in accordance with OH&S legislation and Eastern Health policies and promote a working environment that is congruent with these guidelines. This includes staff reporting of all clinical and OHS incidents and near misses, in particular those related to Occupational Violence, Manual Handling and Slips, trips and falls. Staff are required to comply with all state legislative requirements in respect to the Occupational Health and Safety Act 2004 and the Workplace Injury Rehabilitation and Compensations (WIRC) Act 2013.

4. TRAINING AND DEVELOPMENT

Relevant, practical and timely education should direct, facilitate, enhance and support the professional growth and practice of employees in a health environment characterised by change. All programs should endeavour to promote evidence-based practice, a problem-solving approach and to be competency based.

You are expected to participate in the personal development process on an annual basis.

5. QUALITY

As a staff member of Eastern Health staff are required to comply with Eastern Health performance standards and participate in continuous monitoring and improvement as part of your role. You are also required to comply with legislation, professional standards and accreditation standards.

As a staff member employed by Eastern Health services you must have and maintain the appropriate skills and knowledge required to fulfil your role and responsibilities within the organisation. In addition, you must ensure that you practice within the specifications of this position description, and where applicable within the agreed scope of practice.

You are responsible for ensuring safe high-quality care in your work. This will include complying with best practice standards, identifying and reporting any variance to expected standards and minimising the risk of adverse outcomes and patient harm. In addition, you will ensure that service and care is consistent with the EH approach to patient and family centred care.

6. CONFIDENTIALITY

Any information obtained in the course of employment is confidential and should not be used for any purpose other than the performance of the duties for which the person was employed. Staff are bound by the Information Privacy Act 2000 and the Health Records Act 2001.

7. EQUAL EMPLOYMENT OPPORTUNITY

You agree to adhere to the Equal Employment Opportunity policies and practices of the Health Service. Discriminatory practices, including sexual harassment, are unlawful. The Health Service will not tolerate

discriminatory behaviour, and any such conduct may lead to the invoking of the Disciplinary Policy and Procedure, which may result in termination of employment.

8. PERFORMANCE DEVELOPMENT

A Performance Review, that includes agreed targets, will occur three (3) months from commencement and then annually on the basis of the duties and responsibilities outlined in this position description. This is an opportunity to review personal and the allocated work unit's service performance, facilitated by the setting of objectives/goals and ongoing evaluation of performance and achievement. Objectives will be developed annually, documented, discussed and agreed with the immediate line manager, who will act as the assessor. The incumbent is expected to demonstrate and show evidence annually of on-going self and allocated work unit's service development.

9. EASTERN HEALTH'S PROMISE

Our promise to our communities, patients, consumers and staff is that we will be **HEALTHIER TOGETHER**. Bolder than a vision for the future, our promise calls us to action. We know that working together is the only way we can achieve what is necessary for a healthier future.

Our values are ones in action and are the behaviours that matter most.

- Respect for all
- Safe always
- Partnering in care
- Learning and improving everyday

Learning from the challenges of the past and looking to the future, we understand that we are building towards a more engaged, more reliable, always safe health service in partnership with our people to improve every day.

10. ATTACHMENTS

- Attachment 1 Key Selection Criteria

11. NOTE

Statements included in this position description are intended to reflect in general the duties and responsibilities of this position and are not to be interpreted as being all-inclusive.

Prior to accepting any offer of employment, prospective employees will be required to read and commit to the Eastern Health Code of Conduct, including (but not limited to) issues of Occupational Health and Safety, Equal Opportunity and Confidentiality.

Vaccination against infectious disease is a mandatory requirement of this role. An offer of employment is conditional on you providing evidence that you are currently vaccinated against COVID-19, prior to commencing employment.

Signed: _____

Date: ____/____/____

Manager

INCUMBENT STATEMENT

I _____ (Incumbent Name) have read, understood and accepted the above Position Description and associated Attachments.

Signed: _____

Date: ____/____/____

ATTACHMENT 1**KEY SELECTION CRITERIA**

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Essential

- Relevant tertiary qualification in Computer Science, Data Science, Software Engineering, Information Systems, or a related discipline, **or** equivalent industry experience.
- Experience developing and maintaining data pipelines using SQL, Python, and modern data engineering tools.
- Experience working with cloud platforms and contemporary data architectures.
- Ability to integrate data across systems and work with APIs or similar interfaces.
- Understanding of data governance, privacy, security, and quality assurance.
- Experience deploying or supporting predictive models or advanced analytics in operational environments.
- Ability to diagnose and resolve data issues, performance problems, and workflow interruptions.
- Strong communication skills, including the ability to work effectively with technical and non-technical stakeholders.
- Demonstrated ability to work independently, manage time, and meet deadlines.
- Proficiency with workplace digital tools and documentation practices.

Desirable

- Experience with healthcare data systems or working in regulated environments.
- Familiarity with clinical workflows, digital tools used by clinicians, or EMR system backends.

- Experience with testing, validation, and quality frameworks for digital or data-driven tools.
- Experience working with safety-critical or high-reliability systems.
- Relevant cloud, data engineering, or health informatics certifications.
- Experience contributing to technical documentation, change processes, or system integration projects.

Aboriginal & Torres Strait Islander Candidates

Eastern Health’s Aboriginal Workforce Plan 2023 – 2026 was released in February 2023. With a strong focus on cultural safety and belonging, actions included in the Workforce Plan provide practical supports for all Aboriginal and/or Torres Strait Islander staff.

An Aboriginal Employment Coordinator is available to ensure each person has culturally safe and positive employee experiences which foster belonging and access to diverse experiences and career pathways. Should you require further information regarding this position or support to complete an application, please contact the Recruitment Manager for this position or Eastern Health’s Aboriginal Employment Coordinator at Aboriginal.Workforce@easternhealth.org.au