

Post Title: Postdoctoral Researcher, Knowledge Graph for Irish History (Virtual Record Treasury of Ireland)

Post Duration Specific Purpose 1st September 2023 until 31st August 2025 (24 months)

Salary Scale: *Irish University Association (IUA) Postdoctoral Researcher Scale Point 2: 52,000 euro*

Location: Trinity College Dublin

Reports to: Professor Declan O'Sullivan

Closing Date: 30th May 2023

Apply: <https://forms.gle/26qWHHdyWjEHJ63K9>

Research Project/Challenge

An exciting role has emerged to join the Virtual Record Treasury of Ireland Project at the ADAPT Centre, Trinity College Dublin, working with historians, conservators, archivists and computer scientists to develop novel knowledge graph approaches to support their research. This is a multifaceted role offering an exciting position within a national legacy project to mark the Decade of Centenaries.

In 2022, the Virtual Record Treasury of Ireland launched the Knowledge Graph for Irish History. This is now live as part of the Virtual Record Treasury of Ireland:

<https://virtualtreasury.ie/knowledge-graph>. In the current phase of the project, the role of the Knowledge Graph Postdoctoral Researcher will be in the development of novel tools and approaches to support historians and others, interact, edit and engage with the Knowledge Graph in support of their research objectives. Given that interacting with Knowledge Graphs by non-knowledge engineers is still an under-researched topic, there is significant opportunity for contributions and impact to be made in the Knowledge Graph research community through this role.

Filling this role will involve collaborating closely with a team of historical researchers who are experts in the content of the historical corpus, as well as Computer Science researchers from other research domains. An ability to communicate Computer Science concepts clearly and effectively to potential non-experts, and a capacity to assimilate information from other experts in different domains is an important requirement of the position.

Due to the postdoctoral researcher's central role in data representation and data capture, the remit of this position will also involve guiding and informing other data capture aspects of the project.

This is a challenging role that requires excellent problem-solving skills, and an ability to perform research across a number of Computer Science domains whilst adhering to best practices with respect to information integrity from the perspective of historical research.

Duties & Responsibilities

- Work effectively with other Virtual Record Treasury of Ireland computer science researchers to achieve the ambitious goals of the project.
- Will be a conscientious engineer who take pride in writing well organised and documented code
- Excellent written and oral proficiency in English (essential), good communication and interpersonal skills both written and verbal
- Proven ability to prioritise workload and work to exacting deadlines
- Flexible and adaptable in responding to stakeholder needs
- Strong team player who can take responsibility to contribute to the overall success of the team
- Enthusiastic and structured approach to research and development
- Excellent problem-solving abilities
- Document all work to ensure code is easily understood by peers.

Minimum Qualifications:

Applicants must have a PhD in Computer Science or a related discipline plus four years relevant experience.

Knowledge & Experience

- Experience with W3C-based Knowledge Graphs/Linked Data/Semantic Web (RDF, OWL, SPARQL etc.)
- Design and extend semantic ontologies in accordance with best practices
- Experience with SQL databases and KG triplestores (such as GraphDB, Parliament, Virtuoso, Fuseki etc).

Candidates may also benefit from previous experience:

- Contributing to novel approaches to user interactions with knowledge graphs
- Developing front-end interfaces for tools and services
- Coding using Python, Java.
- Awareness of the International Image Interoperability Framework (IIIF) Image, Presentation, and Search specifications.
- Familiarity with the Text Encoding Initiative (TEI) XML format.
- Awareness of Transkribus OCR (<https://readcoop.eu/transkribus/>) tool.
- Developing and deploying web applications with Apache Server and Apache Tomcat.
- Working with Bash and Linux systems
- Digital Humanities projects

Skills

- As this is a multidisciplinary Digital Humanities project, excellent written and oral proficiency in English is required with the ability to understand and analyze stakeholder requests and relay solutions in a clear and concise manner, both to a specialist audience and to a wider public.
- Enthusiastic and structured approach to research and development
- Excellent problem-solving abilities

Benefits

- Competitive salary
- A national legacy project
- Flexible working arrangements
- Computer and peripherals of your choice
- A fast-paced environment with impactful work
- Pension
- Day Nursery
- Travel Pass Scheme
- Bike to Work Scheme
- Employee Assistance Programme
- Sports Facilities
- 22 days of Annual Leave
- Paid Sick Leave
- Training & Development
- Staff Discounts

Application Process

- Cover Letter & CV

- In order to assist the selection process, applicants should submit a full Curriculum Vitae, and a Cover Letter (1 x A4 page) that specifically addresses how the candidate's skills and experience align with the criteria set out above.

Please Note

- Applicants who do not address the application requirements above in their cover letter will not be considered at the short list stage.
- Applicants should note that the interview process for this appointment may include the delivery of a presentation and may include a test of practical skills.

Informal enquiries about this post should be made by e-mail to: Mr Theo Little (theo.little@adaptcentre.ie).

Applications will only be accepted via the following link:

<https://forms.gle/26qWHHdyWjEHJ63K9>

Background to Virtual Record Treasury of Ireland Project

June 30th, 2022, marked the centenary of the terrible explosion and fire at the Four Courts, Dublin, which destroyed the Public Record Office of Ireland (PROI) and, with it, seven centuries of Ireland's collective memories. While incomparable with the loss of human life, the destruction of the Record Treasury at the PROI was one of the great tragedies of the Civil War.

Virtual Record Treasury of Ireland is an exciting all-island and international research programme to recreate digitally this lost national treasure. Through its innovative and experimental combination of historical research, archival discovery and technical innovation, Virtual Record Treasury of Ireland offers a lasting and meaningful legacy from the Decade of Centenaries, democratising access to invaluable records and illuminating seven centuries of Irish history.

On 30 June 2022, the Virtual Record Treasury of Ireland (www.virtualtreasury.ie) was launched — an open-access, virtual reconstruction of the Record Treasury destroyed at the PROI in 1922. Significantly, the Virtual Record Treasury provides an innovative enabling framework for connecting archival collections worldwide and rediscovering our collective national memories.

About the ADAPT Centre

ADAPT is the world-leading SFI research centre for AI Driven Digital Content Technology, coordinated by Trinity College Dublin and based within Dublin City University, University College Dublin, Technological University Dublin, Maynooth University, Munster Technological University, Athlone Institute of Technology, and the National University of Ireland Galway. ADAPT's research vision is to pioneer new forms of proactive, scalable, and integrated AI-driven Digital Content Technology that empower individuals and society to engage in digital experiences with control, inclusion, and

accountability with the long term goal of a balanced digital society by 2030. ADAPT is pioneering new Human Centric AI techniques and technologies including personalisation, natural language processing, data analytics, intelligent machine translation human-computer interaction, as well as setting the standards for data governance, privacy and ethics for digital content.

Our Research Vision

Governments and civil society are starting to recognise the need for urgent and concerted action to address the societal impact of the accelerating pace of digital content technologies and the AI techniques that underpin them. ADAPT provides an ambitious, ground-breaking, integrated research programme that assembles three interlocking Strands that together are capable of addressing this challenge. Each of these complementary and reinforcing research Strands takes one of the different perspectives on the provision of personalised, immersive, multimodal digital engagement, i.e. the individual's experience and control of the engagement, the algorithms underlying digital content processing, and the balanced governance by enterprise and societal stakeholders.

Diversity

ADAPT is committed to achieving better diversity and gender representation at all levels of the organisation, across leadership, academic, operations, research staff and studentship levels. ADAPT is committed to the continued development of employment policies, procedures and practices that promote gender equality. On that basis we encourage and welcome talented people from all backgrounds to join ADAPT.