



**Research Centre**

ADAPT

**Post title**

Senior Research Engineer

**Post duration**

Fixed Term Contract up to two years

The ADAPT Centre for digital content platform technology seeks to appoint Research Engineer(s) on a fixed term contract basis to facilitate the delivery of platform and targeted research projects. Working at the boundary of research and industry, the ADAPT Centre Spokes programme is an industry-focused programme where teams of researchers and research engineers collaborate with industry partners to work on solutions to industry needs. Successful industry participation is key to the ability of the Centre to deliver economic and commercial impact, and to its future sustainability.

ADAPT is Ireland's global centre of excellence for digital content technology. Led by TCD, it combines the expertise of researchers at four universities (Trinity College Dublin, Dublin City University, University College Dublin, and Dublin Institute of Technology) with that of its industry partners to produce groundbreaking digital content innovations.

ADAPT brings together more than 120 researchers who collectively have won more than €100m in funding and have a strong track record of transferring world-leading research and innovations to more than 140 companies. With €50M in new research funding from Science Foundation Ireland and industry, ADAPT is seeking talented individuals to join its growing research team. Our research and technologies will continue to help businesses in all sectors and drive back the frontiers of future Web engagement.

**Duties and Responsibilities**

You will be working with the best and brightest talent in language technologies, content analytics, data analytics, adaptivity, personalisation, interoperability, translation, localisation and information retrieval. The successful candidate will have exposure to all aspects of project lifecycle from requirements analysis to design, code, test and face-to-face demonstrations with customers.

This is an awesome opportunity for an early career software engineer who wants to fast track their progression through to specialist AI and Machine learning practices area (or domains). The team consists of 9 engineers and designers, 4 project managers and 2 system administrators. DLAB team members are empowered to work across all stages of the product development lifecycle and can be expected to propose architectural approaches, to engage actively in design workshops with industry partners and post-doctoral researchers and to demonstrate their work at professional and public events in addition to designing, writing and testing code.

Being a university based research centre we also strongly support continuous professional development and education.

In DLAB you will develop as an engineer, technically and scientifically. In addition, your confidence, leadership skills and communication abilities will be greatly enhanced.

The research engineer will:

- Be a conscientious software engineer who takes pride in writing clean code
- Be proficient in the use of well-established design patterns and software engineering practices
- Be an authority on Machine Learning and NLP techniques
- Have a thorough understanding of, and experience with, development of web-based applications
- Implement and develop unit tests of individual software components to ensure functionality and robustness of software applications
- Document all work to ensure code is easily understood by peers
- Have extensive experience with Code Repositories (Git)
- Create Virtual Machines and EC2 instances loaded with the necessary software and application dependencies
- Work closely with UI and UX designers
- Have a thorough understanding of, and experience working in an Agile environment and working with Agile methodologies
- Ensure team members are up to date with the work that is done
- Work with ADAPT industry partners to define requirements, troubleshoot issues and conduct demonstrations

**Qualifications**

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

## **Desirable**

A postgraduate qualification (which includes specialisation in one or more of NLP, AI, Machine Learning, Deep Learning)

## **Experience**

The successful candidate has a broad experience in every aspect of the web development lifecycle. We are looking for someone who codes in multiple languages fluently and takes pride in the quality of their work. Someone who ensures their work - and that of their teammates - adheres to good standard practices and proven design patterns. The Research Engineer understands all aspects of industrial standard software development. This includes management of EC2 instance and data repositories of different types. The Research Engineer has extensive experience with sentiment analysis, topic modelling, named entity recognition, information retrieval and other NLP-related techniques. SQL, No-SQL and Linked data repositories and optimal data retrieval are part of the successful candidate's workload. The Research Engineer knows how to handle Message Queues but also knows how CSS can be used to improve User Experience. Below are some pointers for the type of experience we require:

- Expert knowledge of, and experience with, NLP and Machine Learning is required
- Excellent knowledge of one or more of: Java, C++, PHP, node.js, Matlab/Octave, R, Objective-C, C
- Excellent knowledge of scripting languages: Python, Bash, Perl, JavaScript, d3.js
- Experience working with UNIX, Linux, VMWare, OSX and Windows operating systems
- Database management skills: NoSQL, Graphing Databases, SQL
- Experience with web crawling, data wrangling, data analysis
- Excellent Understanding of Unit and Regression Testing Frameworks
- Knowledge of web application development and security
- EC2 expertise

## **Skills**

- Excellent written and oral proficiency in English (essential), good communication and interpersonal skills both written and verbal
- Proven aptitude for Programming, System Analysis and Design
- Proven ability to prioritise workload and work to exacting deadlines
- Flexible and adaptable in responding to stakeholder needs
- Experience in releasing code to live production environments

- Strong team player who is able to take responsibility to contribute to the overall success of the team
- Enthusiastic and structured approach to research and development
- Excellent problem-solving abilities
- Desire to learn about new products, technologies and keep abreast of new product, technical and research developments

**Closing date:** 12<sup>th</sup> October 2018

**Salary scale:** €45,943 - €55,158

*\*Appointment will be commensurate with qualifications and experience and will be made on the appropriate point of the salary scale, in line with current Government pay policy.*

**Informal Queries to:**

Cliodhna Horan [cliodhna.horan@adaptcentre.ie](mailto:cliodhna.horan@adaptcentre.ie). Please include the ADAPT Position Title in all email communications.

*Please do not send applications to this email address, instead apply as described below.*

**Application Procedure**

Application forms are available from the DCU Current Vacancies (open Competitions) website at <https://www.dcu.ie/hr/vacancies/index.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0) 1 7005149.

**Please clearly state the role that you are applying for in your application and email subject line:**

**Job Ref 1009 Senior Research Engineer, ADAPT**

Applications should be submitted by email to [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie) or by Fax: +353 (0)1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500; Email: [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

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