Post Specification

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>Full-stack Research Engineer for Start-up</th>
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<tbody>
<tr>
<td>Post Status:</td>
<td>Approximately 12 months (Full-time)</td>
</tr>
<tr>
<td>Department/Faculty:</td>
<td>ADAPT Centre, School of Computer Science and Statistics, Trinity College Dublin, the University of Dublin</td>
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<tr>
<td>Location:</td>
<td>ADAPT Centre, Trinity College Dublin</td>
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<tr>
<td>Reports to:</td>
<td>Technical/Commercial Lead</td>
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<tr>
<td>Salary:</td>
<td>€39,982 - €59,026 per annum (depending on experience)</td>
</tr>
<tr>
<td>Hours of Work:</td>
<td>40</td>
</tr>
<tr>
<td>Closing Date:</td>
<td>Until filled</td>
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The successful candidate will be required to take up the post as soon as possible.

Informal enquiries about this post should be made to by e-mail to: kieran.fraser@adaptcentre.ie

Post Summary
The SFI Funded ADAPT Centre for Digital Content Technology seeks to appoint a Full-stack Research Engineer to contribute toward the development and launch of an intelligent push-notification platform, EmPushy. By taking on this role will be part of an original start-up team which will spin-out of Trinity College Dublin within the next 12 months.

This project has been funded by Enterprise Ireland to commercialise research undertaken on push-notifications which seeks to improve various features notifications such as: creation, presentation and delivery, in order to improve the push-notification experience for subscribers receiving notifications and the businesses/brands pushing them.

On average, a person receives approx. 80 push-notifications a day, over half of which don’t add value for the receiver and therefore, also don’t add value for the business pushing them – they are simply distractions. EmPushy can reclaim up to 15 minutes of wasted time a day for those who receive push-notifications and eases the process for those businesses creating them.
EmPushy is an intelligent push-notification engine which can act as a mediator between the business pushing and the person receiving notifications, recommending content for the business to push and filtering undesirable notifications on behalf of the receiver, ensuring the right information is delivered at the right time, guarding state-of-mind and empowering end-user control as well as digital health.

The cultural backlash against excessive/distracted smartphone usage and the negative impact on wellbeing has become well known amongst the general public worldwide. In particular, service providers (Mobile Network Operators, Social Media Players) and hardware manufacturers are now actively seeking solutions to improve relationships with technology. Therefore, there is a unique opportunity to seize a competitive advantage through the intelligent and empathetic services provided by EmPushy.

This is a unique opportunity to be part of a project borne of research and now transitioning into a start-up and commercial markets. The aim of this project it to validate the effectiveness and efficiency of the intelligent push-notification platform with real trial partners through development of an Minimum Viable Product (MVP) which can scale.

We are seeking an experienced Full-stack engineer to contribute toward scoping the technical architecture and building the EmPushy MVP for integration with our trial partners.

**Standard Duties and Responsibilities of the Post**

- Contribute to development of system architecture;
- Contribute to scoping data features required by Machine Learning models;
- Contribute to developing a strategy for data management (encryption, anonymisation etc.)
- Contribute to identification of an effective distribution method (edge vs cloud)
- Contribute to scoping trial parameters with trial partners
- Contribute to validating model performance through A/B testing
- Contribute to deployment and supporting systems during trial
- Contribute to report deliverables of the project
- Report on and present progress/assessment of performance

**Person Specification**

The successful candidate should be proactive, comfortable with high levels of autonomy and able to thrive in uncertain and ambiguous environments. Candidates should be motivated by difficult problems and eager to bring a new product to market.

**Qualifications**

Candidates appointed to this role must have a (minimum) BSc. and/or MSc. in Computer Science / Engineering or similar with product development experience in a commercial setting.
Knowledge & Experience (Essential & Desirable)

Essential

- Proven experience developing strategic system architecture plans
- Solid understanding of programming (e.g. languages such as Python, Java, Javascript, HTML5, Swift) and coding for large scale cloud computing systems (e.g. such as Azure, SageMaker or Google Cloud Platform)
- Experience with and understanding of Machine Learning and frameworks for training and deploying models (e.g. tensorflow, pytorch)
- Strong analytical, conceptual and troubleshooting abilities
- Strong team player
- Excellent written and verbal communication skills (English)
- Solid understanding of information processing fundamentals and best practices
- Experience identifying, analysing and resolving system problems
- Experience conducting technology, trends, standards and products research

Desirable

- Full-stack development experience
- Agile development
- Exposure to commercialisation of research
- Prior start-up experience
- Marketing experience

Skills & Competencies

- Proven ability to prioritise workload and work to exacting deadlines.
- Excellent problem solving abilities.

Benefits

- Competitive salary and equity
- 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
Further Information for Applicant

ADAPT is Ireland’s global centre of excellence for digital media technology. Led by TCD, it combines the expertise of researchers at four universities (Trinity College Dublin, Dublin City University, University College Dublin, TU Dublin, Maynooth University, Athlone Institute of Technology and Cork Institute of Technology) with that of its industry partners to produce ground-breaking digital content innovations.

ADAPT brings together more than 220 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 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.

<table>
<thead>
<tr>
<th>URL Link to ADAPT Centre</th>
<th><a href="https://www.adaptcentre.ie/">https://www.adaptcentre.ie/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>URL Link to Area</td>
<td><a href="http://www.tcd.ie">www.tcd.ie</a></td>
</tr>
<tr>
<td>URL Link to Human Resources</td>
<td><a href="https://www.tcd.ie/hr/">https://www.tcd.ie/hr/</a></td>
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Trinity College Dublin, the University of Dublin

Trinity is Ireland’s premier university, with a proud tradition of excellence stretching back to its foundation in 1592. The oldest university in Ireland, and one of the oldest in Europe, today Trinity sits at the intersection of the past and the future, and is ideally positioned as a major university in the European Union. Our 47-acre campus is located in the heart of Dublin city centre and is home to historic buildings dating from the University’s establishment, as well as some of the most cutting-edge teaching and research facilities in Ireland. Students at Trinity benefit from a unique educational experience across a range of disciplines in our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences. The pursuit of excellence through research and scholarship is at the heart of a Trinity education, and our researchers have an outstanding publication record and strong record of grant success.

Trinity has developed [18 broad-based multidisciplinary research themes](#) that cut across disciplines and facilitate world-leading research and collaboration within the University and with colleagues around the world. These internationally recognised themes include such diverse areas as Cancer, Immunology, Telecoms, Identities in Transformation, Nanoscience, Neuroscience, and Making Ireland. Researchers from across the University work together in innovative ways to develop new and exciting approaches to their research and explore the frontiers of knowledge in the 21st century. In creating these dedicated research themes, Trinity’s researchers are able to become a more powerful force on the global stage, successfully competing for large-scale grants and attracting top students and faculty to the University. Trinity is home to Ireland’s first purpose-built Nanoscience research institute, CRANN, which opened in January 2008. This state-of-the-art facility houses 150 scientists, technicians, and graduate students in specialised laboratories, fostering creative innovations that have seen Trinity’s researchers make significant breakthroughs.
The Trinity Long Room Hub for Arts and Humanities Research Institute is the University’s flagship institute for research in the Arts and Humanities, providing a world-class environment for cross-disciplinary collaborative projects. The Long Room Hub provides a central location through which the University’s internationally respected Arts and Humanities research can become more visible, demonstrating its relevance for contemporary and future societies. Researchers from across the University regularly participate in debates on topical issues facing the world today. As well as operating an International Visiting Research Fellowship programme, the Long Room Hub also hosts major EU-funded Digital Humanities projects.

One of the most instantly recognised parts of Trinity’s campus is the famous Old Library, home to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps, and early printed material. Trinity’s Library is the largest research library in Ireland and is an invaluable resource to Trinity’s students and research community. Built up over the four centuries of the University’s existence, the Library’s collections have benefitted from its status as a Legal Deposit library for the past 200 years, granting Trinity the right to claim a copy of every book published in Ireland and the UK. At present, the Library’s holdings span approximately 4.25 million books, 22,000 printed periodical titles, and access to 60,000 e-journals and 250,000 e-books.

Trinity attracts top students from Ireland and abroad and prides itself on the consistently high standard of student admitted to the University every year. These students are drawn to Trinity for the excellence of our research-led teaching and for the quality and prestige a degree from this University confers. Trinity has also pioneered accessibility to education in Ireland, becoming the first university in the country to reserve 15% of its undergraduate places for students from non-traditional learning groups. Trinity is the top-ranked European university for student entrepreneurship and Europe’s only representative in the world’s top-50 universities.

Our alumni have gone on to shape the history of Ireland and of Western Europe in a wide range of fields. These include such notable figures as Jonathan Swift, Oscar Wilde, William Rowan Hamilton, Edmund Burke, William Stokes, Denis Burkitt, Louise Richardson, Lenny Abrahamson,
and Anne Enright. Three of Trinity’s graduates have been awarded Nobel prizes: Ernest Walton for Physics in 1951; Samuel Beckett for Literature in 1968; and William Campbell for Physiology / Medicine in 2015. Trinity also counts the first female President of Ireland among its alumni in Mary Robinson, as well as other notable former Presidents Douglas Hyde and Mary McAleese. At Trinity we are justifiably proud of our tradition, and we strive to uphold this excellence as we face the demands of the 21st century.

**Ranking Facts**

Trinity is the top ranked university in Ireland. Using the QS methodology, the University is ranked 104th in the world and using the Times Higher Education World University Rankings methodology Trinity is 117th in the world.
Overall

- Trinity is Ireland’s No.1 University in the QS World University Ranking, THE World University Ranking and the Academic Ranking of World Universities (Shanghai).
- Trinity is ranked 104th in the World, and 36th in Europe, in the 2018/2019 QS World University Ranking.
- Trinity is ranked in the Top 120 for Graduate Employability in the QS 2018 Rankings.
- Trinity is in the Top 50 most innovative universities in Europe according to Reuters.¹
- Between 2010 and 2015, Trinity was ranked the top university in Europe for entrepreneurship according to Pitchbook’s independent analysis.²

Internationalisation

- Trinity is ranked 52nd in the world in the THE World University Ranking for international outlook.

Research Performance

- Of the 981 institutions included in the THE World University Rankings for 2017, Trinity is in the top 15% internationally for research performance.
- Trinity is ranked in the top 15% internationally by QS for citations.

In the QS World University Subject Rankings:

- Trinity is ranked in the top 50 worldwide in four subject areas according to the QS World University Subject Rankings 2018. The University is ranked in the top 100 globally for 20 subjects overall.

¹ [http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT](http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT)
Research Themes

- Ageing
- Cancer
- Creative Arts Practice
- Creative Technologies
- Digital Engagement
- Digital Humanities
- Genes & Society
- Identities in Transformation
- Immunology, Inflammation & Infection
- International Development
- International Integration
- Making Ireland
- Manuscript, Book and Print Cultures
- Nanoscience
- Neuroscience
- Telecommunications
- Smart Sustainable Planet
- Next Generation Medical Devices
The Selection Process in Trinity

The Selection Committee (Interview Panel) may include members of the Academic and Administrative community together with External Assessor(s) who are expert in the area. Applications will be acknowledged by email. If you do not receive confirmation of receipt within 1 day of submitting your application online, please contact the named Recruitment Partner on the job specification immediately and prior to the closing date/time.

Given the degree of co-ordination and planning to have a Selection Committee available on the specified date, the University regrets that it may not be in a position to offer alternate selection dates. Where candidates are unavailable, reserves may be drawn from a shortlist. Outcomes of interviews are notified in writing to candidates and are issued no later than 5 working days following the selection day.

In some instances the Selection Committee may avail of telephone or video conferencing. The University’s selection methods may consist of any or all of the following: Interviews, Presentations, Psychometric Testing, References and Situational Exercises.

It is the policy of the University to conduct pre-employment medical screening/full pre-employment medicals. Information supplied by candidates in their application (Cover Letter and CV) will be used to shortlist for interview.

Non-EEA candidates should note that the onus is on them to secure a visa to travel to Ireland prior to interview. Non-EEA candidates should also be aware that even if successful at interview, an appointment to the post is contingent on the securing of an employment permit.

**Equal Opportunities Policy**

Trinity is an equal opportunities employer and is committed to employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community. On that basis we encourage and welcome talented people from all backgrounds to join our staff community. Trinity’s Diversity Statement can be viewed in full at [https://www.tcd.ie/diversity-inclusion/diversity-statement](https://www.tcd.ie/diversity-inclusion/diversity-statement).

**Pension Entitlements**

This is a pensionable position and the provisions of the Public Service Superannuation (Miscellaneous Provisions) Act 2004 will apply in relation to retirement age for pension purposes. Details of the relevant Pension Scheme will be provided to the successful applicant.

Applicants should note that they will be required to complete a Pre-Employment Declaration to confirm whether or not they have previously availed of an Irish Public Service Scheme of incentivised early retirement or enhanced redundancy payment. Applicants will also be required to declare any entitlements to a Public Service pension benefit (in payment or preserved) from any other Irish Public Service employment.

Applicants formerly employed by the Irish Public Service that may previously have availed of an Irish Public Service Scheme of Incentivised early retirement or enhanced redundancy payment should ensure that they are not precluded from re-engagement in the Irish Public Service under the terms of such Schemes. Such queries should be directed to an applicant’s former Irish Public Service Employer in the first instance.
Application Procedure

Applicants should submit a full **Curriculum Vitae** to include the names and contact details of 3 referees (including email addresses), together with a **CV, cover letter (1x A4 page)** as well as a link to LinkedIn profile and to your previous projects.

**APPLICATIONS WILL ONLY BE ACCEPTED** via [https://apply.adaptcentre.ie/apply.php?jobID=EmPushyFSRE](https://apply.adaptcentre.ie/apply.php?jobID=EmPushyFSRE)

*Applicants should reference EmPushyFSRE in their application*