Post Title: Research Engineer
Post Duration: 15 months (approx)
Salary Scale: €38,631 - €50,029
Closing Date: 10 May 2021
Apply: https://apply.adaptcentre.ie/apply.php?jobID=RE_UniCook

Why ADAPT?

- **Contribute** to the ADAPT research agenda that pioneers and combines research in AI driven technologies: Natural Language Processing, Video/Text/Image/Speech processing, digital engagement & HCI, semantic modeling, personalisation, privacy & data governance.
- **Work** with our interdisciplinary team of leading experts from the complementary fields of, Social Sciences, Communications, Commerce/Fintech, Ethics, Law, Health, Environment and Sustainability.
- **Leverage our success.** ADAPT’s researchers have signed 43 collaborative research projects, 52 licence agreements and oversee 16 active commercialisation funds and 52 commercialisation awards. ADAPT has won 40 competitive EU research projects and obtained €18.5 million in non-exchequer non-commercial funding. Additionally, six spinout companies have been formed. ADAPT’s researchers have produced over 1,500 journal and conference publications and nearly 100 PhD students have been trained.

As an ADAPT researcher you will have access to a network of 85 global experts and over 250 staff as well as a wide multi-disciplinary ecosystem across 8 leading Irish universities. We can influence and inform your work, share our networks and collaborate with you to increase your impact, and accelerate your career opportunities. Specifically, we offer:

- Exposure and free access within a multi-disciplinary ecosystem across 8 leading Irish universities
- Opportunity to build your profile at international conferences and global events
- Fast-track your career through formalised training & development, expert one-on-one supervision and exposure to top AI specialists

**About the role**

We’re looking for a PhD/Masters candidate with at least 5 years of research or industrial experience under their belt. The role is to bring our machine learning engine as close to 100% as possible. You will be required to retrain deep-networks on GPU based clusters using a Scrapy/NLTK/spacy machine learning pipeline and to introduce more sophisticated machine learning (including ensemble techniques) with post-processing to bring the sentence level classification closer to 100% for the UniCook platform.
Context
The purpose of this position is to produce research based engineering solutions to natural language processing problems for the UniCOOK product to produce a clear pathway to market. The goal is to produce a mixture of NLP techniques that best provide sentence and document level entity recognition and provide the pathways to produce corresponding links to images (representing the text). A team of developers, commercial lead and the principal investigator on the project will work in conjunction with you to produce a working prototype of the UniCOOK product that will satisfy the requirements of the trail partners and define a base product that will eventually result in an incubation startup if successful.

Minimum qualifications
A suitable candidate will have a MSc and a minimum of 5 years research/ industrial.

Main duties and responsibilities
- Will assist the PI in generating an ensemble of natural language processing techniques.
- Look at the development of links to a user interface where images are presented instead of the recipe text.
- Provide oversight into the link between NLP, search and image processing of individual recipes.
- Develop as a researcher through access to a wide training & development opportunity.
- Build a strong network through opportunities to liaise with internal and external stakeholders including industry and academic partners/collaborators.

Required Experience
- Will have good working knowledge of NLP and parsing techniques
- Good experience of data cleaning and preparation
- Good understanding of limitations of machine learning
- Good working knowledge of LSTMs
- Experience in multiple kinds of deep nets or learning techniques required.
- Experience in multiple domains of data related cleaning and processing (e.g: image processing, search algorithms, SEO, NLP, ethics, a huge plus)

Preferred skills
- Ability to work on own initiative and as part of a team
- Ability to speak in layperson’s English when speaking to image database providers, publishers and grocery retailers in a way that makes the technology digestible
- 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
- 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

**Benefits**

- Competitive salary
- 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**

Submit the following documents via [https://apply.adaptcentre.ie/apply.php?jobID=RE_UniCook](https://apply.adaptcentre.ie/apply.php?jobID=RE_UniCook)

- Cover Letter addressing all skills that you have that match the required experience list above.
- Resume: Detailed curriculum vitae, including education, previous experience and previous project work.

**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.

**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.

Digitally Enhanced Engagement Strand
From the individual perspective, research within this Strand will deliver proactive agency techniques that sense, understand and proactively serve the needs of individual users to deliver relevant, contextualised and immersive multimodal experiences which also offer them meaningful control over the machine agency delivering those experiences.

Digital Content Transformation Strand
From the algorithmic perspective, new machine learning techniques will both enable more users to engage meaningfully with the increasing volumes of content globally in a more measurably effective manner, while ensuring the widest linguistic and cultural inclusion. It will enhance effective, robust integrated machine learning algorithms needed to provide multimodal content experiences with new levels of accuracy, multilingualism and explainability.

Transparent Digital Governance Strand
From the enterprise and societal perspective, new structured knowledge frameworks and associated practices for AI data governance will be required to balance the needs and values of individuals, organisations and society when it comes to rich digital experiences. This requires the advancement of research in the areas of data ethics, data quality, data protection, data value, data integration, and multi-stakeholder governance models.