Game Analytics and Player Psychology - EPSRC NPIF
PhD studentship in partnership with Square Enix West

University of York

Qualification type: PhD
Location: London
Funding for: UK citizens and EU citizens who have resided in the UK for the past three years (EPSRC eligibility requirements apply)
Duration: Funding is available for a minimum of 3 years and up to a maximum of 4 years
Funding amount: Full coverage of tuition fees plus total annual stipend of £30,553 (ie £14,553 RCUK rate for 2017/18 + Additional top-up £16,000 per year from Square Enix).
Hours: Full Time

Placed on: 30 June 2017
Closes: 30 July 2017

The project: Game Analytics and Player Psychology

Background: Last year the UK game industry generated over £4.3 billion in consumer spend. A major challenge facing the industry is to take better advantage of the vast user behaviour datasets that are available.

Objectives: To research the relationship between player behaviour, expressed via large-scale datasets, and motivational models; investigate the related problems of automatic data anomaly detection towards ensuring data quality and enable research into/construction of machine learning models permitting prediction of user behaviour and motivational evolution at large scales.

Novelty: A key challenge is connecting behaviour data with psychological models. Motivations for play and how these relate to in-game behaviours are crucial, as games are dependent on being able to cater to varied motivations, and predict how behaviour/motivation will evolve. Despite widespread interest there is minimal available knowledge.

Approach: the project is a big data project, and will be based on game analytics principles and driven by combinations of explorative and hypothesis-driven work as defined under the knowledge acquisition frameworks in data science.
Timeliness: With business models in the industry changing towards service models and games becoming more persistent, the ability to take action on behavioural data has become a focal point in building competitive edge.

Research supervision

If successful, you will conduct your research under the supervision of:

- Dr. Anders Drachen, Professor (Game Analytics), The Digital Creativity Labs and the Centre for Doctoral Training in Intelligence Games and Game Intelligence.
- Tim Ward, Head of Analytics at Square Enix West (based in London).
- Dr. Sam Devlin, Research Fellow / Lecturer (AI/Machine Learning for games), The Digital Creativity Labs and the Centre for Doctoral Training in Intelligence Games and Game Intelligence.

You will be based full-time with the Core Analytics Team at Square Enix West (SQEX West) in London, UK, and also be affiliated with the Digital Creativity Labs (DC Labs), the largest games research initiative in the world and a Digital Economy Hub of the UK. Furthermore, you will form part of the Centre for Doctoral Training in Intelligence Games and Games Intelligence (IGGI), the largest PhD training programme for technical games research in the world.

At Square Enix West, you will form part of a large and internationally leading team who. Square Enix West's Analytics department is based in London, use multiple data sources to provide insight into user behaviour in our games and supporting services. This helps ensure we can use evidence in our decision making to deliver successful games and provide unforgettable experiences to our fans. The London Analytics team currently has nine analyst positions from intern through to leadership roles. The team supports games from Square Enix External Studios based in London and core activities across all games in SQEX West.

With the DC Labs, you will form part of an internationally leading team that specialize in game analytics, AI, esports, design and business intelligence. The team has a world-leading track record in industrial-academic research, and have been very successful at delivering research results into commercial games. The team includes 23 permanent members of academic staff and 10 post-doctoral research associates within the Digital Creativity Labs, and currently 34 PhD students in the closely linked centre for doctoral training. The team is highly supportive and encourages cross-project collaboration, especially on joint publications and developing new research projects.
Award funding

If successful, you will be supported for a maximum of four years. Funding includes:

- £14,553 (2017/18 rate) per year living stipend from the University of York
- £16,000 (2017/18 rate) per year top-up living stipend from Square Enix
- Home/EU tuition fees (covering university fees)
- RTSG (training/consumables/travel) provision
- Hosted by Square Enix West Core Analytics Team in London

Funding requirements

To be considered for this funding you must:

- Meet the entrance requirements for a PhD in Computer Science (At least a UK Upper Second Class Honours degree or the International Equivalent) (if in doubt please contact Application Enquiries using the details provided at the end of this text).
- Be eligible to pay home/EU fees and be able to meet the EPSRC requirements: https://www.epsrc.ac.uk/skills/students/help/eligibility/*

* EU applicants who do not meet the EPSRC residency requirements can apply to be considered for a fees only award, which would mean losing the living stipend but keeping the Square Enix provided stipend and all other support.

We will look favourably on applicants that can demonstrate knowledge and skills as outlined in the below table.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Essential</th>
<th>Desirable</th>
</tr>
</thead>
</table>
| Knowledge & Experience | Familiar with Kanban & Scrum. Extensive experience in data analytics reporting and analysis. | Understanding of data collection and processing techniques  
Experience of mentoring  
Knowledge of video games and the surrounding culture  
Experience using Jira and Git |
| Competencies, Skills & Attributes | Strong analytical and programming skills  
Wide knowledge of data analysis techniques  
Highly competent SQL coder  
Knowledge of a language used for analysis such as R or Python  
Excellent communication skills both written and verbal  
Proactive  
Good judgement  
Focused on win-win outcomes  
Comfortable working with people at all organisational levels  
Ability to work under pressure and to deadlines. | Familiarity with the Google Cloud platform |
|---|---|---|
| Other | Excellent attention to detail  
Strong business acumen  
Continually seeking knowledge and understanding  
Passion for video games  
Strongly driven to use scientific method to make evidence based decisions |  |

**Apply for this studentship**

1. **Apply to study**

   You must apply online for a full-time PhD in Computer Science at: [https://www.york.ac.uk/study/postgraduate/courses/apply?course=DRPCOMSSCI3&level=postgraduate](https://www.york.ac.uk/study/postgraduate/courses/apply?course=DRPCOMSSCI3&level=postgraduate)

   You will need to include an academic transcript, a CV, and a personal statement. There is no need to write a full formal research proposal in your application to study as this studentship is for a specific project. Details on CV requirements etc. are in the [online portal](https://www.york.ac.uk/study/postgraduate/courses/apply?course=DRPCOMSSCI3&level=postgraduate).

   You must quote the project title ("EPSRC NPIF Studentship Square Enix") in your application.
2. Provide a personal statement

As part of your application please provide a personal statement of 500-1,000 words with your initial thoughts on the research topic and its context within industrial Game Analytics.

Deadlines

The closing date for the receipt of applications is **Sunday, 30th July 2017.**

Interviews are expected to take place within approx. 14 days of the closing date.

The studentship must begin in October 2017, unless there are exceptional circumstances.

Informal enquiries

Project enquiries
Professor Anders Drachen
anders.drachen@york.ac.uk

Application enquiries
cs-pg-admissions@york.ac.uk
+44 (0)1904 325404