



Job Title	Junior Programmer/Programmer	Job Code	2018/001
Salary Range	£21k - £28k depending on experience	Closing Date	30/9/18
Full/Part Time	Full time		

About Daden

Daden is a Birmingham UK based 3D/VR immersive learning and training provider and chatbot/AI specialist, using game engine technology such as Unity3D and chatbot engines such as Chatscript to deliver innovative learning, training and mobile applications.

Our clients have included universities and colleges, the health sector and the defence industry, city councils, and central government departments and agencies and we work in the UK and abroad. One of our projects was part of the Open University's Open Science Lab project which won the 2014 Times Higher Education Award for Outstanding ICT project (the second time one of our projects has won that award), and we have also been a finalist for Unity's own awards and the BCS Machine Intelligence Prize.

With a global reputation, the greater visibility of 3D/VR through devices such as the Oculus Rift, and a steady stream of successful and innovative projects the demand for Daden's services continues to grow. We are based at Birmingham Innovation Campus (by Aston University), with a team of young-at-heart and enthusiastic people who are passionate about 3D, VR, chatbots and AI and their use in a business and learning context.

For more information about Daden and what we do see <http://www.daden.co.uk> & www.daden.co.uk/vimeo.

About the Role

We are looking to recruit a junior or experienced programmer to work across the full range of our very varied and often highly innovative projects. In just the last 12 months projects these have included four different chatbot/natural language applications (one optimised for mobile) covering topics from maths tuition to personal coaching (all Chatscript), a mobile personal security application (Android and C#), two 3D/VR exercises for nursing training (both implemented using Fieldscapes, our 3D/VR authoring tool built on top of Unity with Oculus Rift), and a 3D/VR recreation of the Avebury Ring Neolithic site (also in Fieldscapes) which has been wowing visitors to the National Trust museum there.

Our most commonly used technologies are C# ASP.NET, Unity3D (C#), SQL and NoSQL (triplesbases) and HTML/CSS/Javascript, typically in a web-services connected client-server mode. We currently use Chatscript for most of our chatbot projects but have used AIML in the past and are currently evaluating systems such as Watson. We have also developed mobile applications on Android and iOS. We are increasingly looking to use WebGL and have some interest in Machine Learning techniques. We use contractors for the majority of our 3D modelling work but it is useful to have a basic understanding of 3D modelling so as to ease the integration of 3D models within projects, and to do any minor 3D build work. Likewise although we can use contractors for 2D GUI and audio design an appreciation and capability in these areas is useful.

We are a small team so you will be expected to get involved with whatever the projects require, and we are constantly learning new skills and interfacing new hardware (from MIDI mixers to Oculus Go). Aptitude is more important than experience and qualifications, but a year of so of commercial coding experience would be useful.

For more information see the Job and Person Specifications below.

If you're interested

Any enquiries about this position should in the first instance be by email to: work@daden.co.uk
Please include an up to date CV (and portfolio links if applicable), daytime contact number and details of your current position, salary and notice period (if applicable). Please put the Job Code in the email title.

Job Specification

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Benefits	<p>23 days leave. Leave year starts 1 Jan.</p> <p>As tenants at Innovation Birmingham Campus you can use the Aston University sports/health facilities at University Staff rates.</p> <p>Daden operate a Government approved Workplace Pension scheme.</p>		
Location	<p>Faraday Wharf, Innovation Birmingham Campus, Holt St, Birmingham, B7 4BB</p> <p>After the 3 months probation you may be offered the opportunity to work from home for up to 2 days a week (or equivalent hours)</p>		
Report to	Development Manager	Department	Development
Summary of Role	<p>Part of a small development team involved in a full range of projects across 3D immersive environments, chatbots, AI, mobiles and related areas. Contributing as required to other Daden projects, and activities including but not limited to the writing, maintenance and support of Daden software applications, customisation of open-source applications, and support of Daden's limited IT infrastructure</p>		
Main Duties & Responsibilities	<p>Depending on skill-set and expertise:</p> <ul style="list-style-type: none"> • Develop chatbots in Chatscript and on other chatbot/AI platforms for use in web-based, mobile and 3D virtual environments • Add new functionality and support bug-fixing and performance improvements in our Fieldscapes and Trainingscapes 3D/VR authoring and delivery application • Develop mobile applications, principally on Android but also iOS – and both native (Java, Objective C) and via Unity3D • Develop, immersive single and multi-user environments and applications based on technologies such as Unity3D and WebGL • Develop client (web and desktop) and server applications, and supporting web services, to support immersive environments (eg account management) using ASP.NET, SQL databases and industry standard HTML5/CSS/DOM/Javascript approaches where applicable. <p>Further develop existing Daden applications, and new applications, in response to client and Daden requirements.</p> <p>Follow and help improve Daden version control, testing and release methodologies.</p> <p>Support Daden software applications in response to fault and failure reports. Write and execute test plans. Complete product and project documentation.</p>		

Secondary Tasks	<p>3D building, 2D GUI and audio design as required.</p> <p>Contribute to the learning design of projects.</p> <p>Web scripting to support the Daden web site</p> <p>Set up servers running immersive environment applications and services(e.g. Photon), fault find and fix on them</p> <p>Support and manage routine office IT systems, servers, networks, hardware and software</p> <p>Assist in technical set-up of demonstrations</p> <p>Support of marketing activities as required</p>
Travel	<p>Occasional visits to client sites may be required, including occasional over-night stays and possibly very occasional overseas travel.</p>
Example Projects/Tasks	<p>Create an XML based exercise definition and C# player to create data driven 3D/VR immersive learning experiences.</p> <p>Write a chatbot using Chatscript which is accessible both as a web application and a local mobile application.</p> <p>Implement the Tin-Can API within an immersive learning project in Unity3D.</p> <p>Develop an interface to retrieve, plot and flexibly visualise Twitter data within WebGL and Mobile environments.</p>

Person Specification

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	Essential	Desirable
Competencies Qualifications	Proven programming aptitude and ability are more important than academic qualifications or specific languages.	Degree in computer science
Experience & Knowledge	<p>Highly Desirable</p> <p>C# ASP.NET client coding, including Javascript, CSS, HTML5, JSON/XML, JQuery</p> <p>C# server coding, incl SQL interfaces, JSON/XML and web services interfaces</p> <p>Able to operate in a robust version control and test regime</p> <p>Unity scripting (C#) and programming – client and server</p> <p>Experience in developing natural language/AI applications (e.g. Chatscript, AIML)</p>	<p>Desirable</p> <p>Experience in developing data visualisation applications</p> <p>Mobile development (Android and iOS)</p> <p>Experience in developing 3D games, simulations or eLearning applications using Unity3D</p> <p>WebGL and D3.js Experience</p> <p>Familiarity with Python, Java, C++, XSLT</p> <p>Experience of Hadoop and other NoSQL and “Big Data” technologies</p> <p>Integration to standard corporate IT systems, eg LDAP</p> <p>Set up of server environments, ideally in relation to gaming/small scale MMO systems, Photon, Microsoft IIS and Linux/Apache/MySQL environments</p> <p>Able to fault find, fix and customise open-source code</p> <p>Able to manage routine office IT systems, servers, networks, hardware and software</p>
Skills and Abilities (including organisational communications creative)	<p>Essential</p> <p>Able to write and test code to create the deliverable against a system design</p> <p>Able to work fast and to tight deadlines (typical projects only have a 6 - 12 week core development period)</p> <p>Ability to present work to colleagues, prospects and clients</p> <p>Ability to prioritise and manage own workload</p>	<p>Desirable</p> <p>Able to create a system design (functional and technical) from client briefing/requirements document and existing technical standards</p> <p>Graphic and UI design skills</p>

Personal Qualities	<p>Proficient in PC and web use and standard office software (email, word processing, spreadsheets, presentations etc.)</p> <p>Very good written and spoken English</p>	
	<p>Ability to work flexibly, on own initiative and as part of a team</p> <p>Willingness to constantly learn new skills</p> <p>Ability to manage relationships with tact and diplomacy</p> <p>Willing to work on Defence and Security projects and have no barriers to security vetting if required</p> <p>Willing to undergo a DBS check for client projects where required</p>	<p>Able to work from home with minimal supervision on a regular basis</p> <p>Comfortable working as an avatar in a virtual world</p> <p>UK Citizen given the nature of some projects.</p>