

# Swydd Ddisgrifiad



<b>Cyfadran/Adran</b>	Y Gyfadran Gwyddorau Cymdeithasol a Bywyd
<b>Adran</b>	Efelychu
<b>Teitl y Swydd</b>	Datblygwr Systemau Realiti Estynedig (AR) /Realiti Cymysg (MR) (Swyddog Cyswllt KTP)
<b>Rhif y Swydd</b>	2122701
<b>Yn atebol i</b>	Uwch Ddarlithydd mewn Efelychu a Digiddeiddio gyda PGW a goruchwyliwr cwmni cynnal

## Prif Atebolrwydd

Gwneir y penodiad hwn o ganlyniad i gymeradwyaeth Partneriaeth KTP gyda Ruth Lee Ltd.

Mae Ruth Lee yn gwmni blaenllaw byd-eang yn y maes gweithgynhyrchu *manikins* tebyg i bobl go iawn a chymhorthion hyfforddi. Ar hyn o bryd, maent yn cyflenwi *manikins* hyfforddi i 100% o Wasanaethau Tân ac Achub y DU, ac mae gan y cwmni filoedd o gwsmeriaid mewn gwasanaethau brys eraill ledled y byd.

Bydd y KTP yn ymgorffori galluoedd technoleg drochi/realiti cymysg sy'n newydd i'r sector i mewn i Ruth Lee er mwyn cynnig cynnyrch hyfforddi arloesol.

O fewn y swydd gyffrous hon bydd angen rheoli prosiect sy'n cyflawni amcanion technegol ac yn trosglwyddo gwybodaeth a osodwyd fel rhan o'r prosiect. Byddant yn defnyddio'r arbenigedd ym Mhrifysgol Prifysgol Glydŵr Wrecsam, ac yn gweithio â hi, i ymgorffori gwybodaeth am dechnoleg realiti cymysg a meddalwedd allweddol i mewn i Ruth Lee er mwyn gallu cynhyrchu a datblygu cynnyrch yn y dyfodol.

Bydd deiliad y swydd yn gweithio'n bennaf ar safle Ruth Lee yng Nghorwen, gyda'r hyblygrwydd i weithio yn ôl trefniadau hybrid, a cheir cyfle i weithio yn y brifysgol ar sail ad hoc.

Bydd y Swyddog Cyswllt KTP wedi cwblhau gradd mewn datblygu meddalwedd, neu bwnc perthnasol, neu wedi cael profiad helaeth mewn maes perthnasol.

Yn ogystal, bydd deiliad y swydd yn hen lawr ar ddadansoddeg data perthnasol, technolegau gwe, rheolaeth gweinydd a thechnegau dylunio profiad defnyddwyr, neu'n barod i ddysgu amdanynt.

Profiad o fasnacheiddio, creu ased 3D, dylunio realiti cymysg ac estynedig, a datblygu technolegau trochol gan ddefnyddio peiriannau gemau.

## Tasgau Allweddol

- Rheoli'r prosiect partneriaeth KTP i sicrhau bod holl amcanion a cherrig milltir cytunedig yn cael eu bodloni, gan weithio gyda'r cynllun gwaith a'i ddiweddarau fel y cytunwyd
- Defnyddio datrysiadau AR/MR i gyfoethogi ac amrywio ystod o gynnyrch presennol Ruth Lee.
- Gweithio gyda staff y cwmni a'r Goruchwyliwr Sylfaen Wybodaeth i ddeall cefndir syniad y cynnyrch a'r gynulleidfa darged, er mwyn sicrhau y cynhelir proses ddatblygu didrafferth
- Creu manylebau a gofynion yn seiliedig ar ymchwil fewnol ac allanol, i sicrhau y ceir y canlyniadau tymor hir gorau posib
- Cydlynu trafodaethau gyda rhanddeiliaid (yn cynnwys y grŵp peilot a adnabuwyd) i ddeall y gofynion ynghylch cymhathiad system, ymarferoldeb ac anghenion defnyddioldeb gweithredol ar eu cyfer.
- Adeiladu prototeip cychwynnol o'r system, yn cynnwys y nodweddion gofynnol ar gyfer trafodaethau cychwynnol â chleientiaid/grwpiau peilot. Arddangos elfennau yn fewnol o fewn Ruth Lee er mwyn cynorthwyo i rannu gwybodaeth ynghylch taith y datblygiad.
- Edrych ar ffyrdd newydd o ymgorffori datrysiadau sy'n gyfoeth o dechnoleg sy'n amrywio potensial masnachol cynnyrch presennol y cwmni.

## Nodweddion Arbennig

- Oriau gwaith hyblyg, drwy gyfleoedd i weithio o bell ac ar y safle.
- Ariennir y swydd hon yn llawn am 24 mis drwy grant partneriaeth KTP ar y cyd â Ruth Lee.
- Arwain y gwaith o ehangu cyfleoedd busnes drwy ddatblygu a chyflwyno cynnyrch newydd, ac os bydd hynny'n llwyddiannus, siapio twf y seilwaith busnes.
- Mae gwerth £4000 o ddatblygiad proffesiynol wedi'i neilltuo ar gyfer yr ymgeisydd llwyddiannus yn ystod 24 mis cyntaf y prosiect.

## Dyletswyddau Cyffredinol

Cyfrifoldeb y gweithwyr yw ymgorffori Polisi Cyfle Cyfartal y Brifysgol o fewn eu maes cyfrifoldeb eu hunain ac yn eu hymddygiad cyffredinol.

Byddwch yn sicrhau bod systemau a gweithdrefnau rheoli priodol ar waith er mwyn bodloni'ch dyletswyddau a'ch cyfrifoldebau iechyd a diogelwch a gynhwysir ym mholsi iechyd a diogelwch y Brifysgol. Yn benodol, byddwch yn sicrhau bod asesiadau risg priodol

yn cael eu cynnal mewn cysylltiad â pheryglon sylweddol ac yr ymgymerir ag arolygon diogelwch o leiaf unwaith y flwyddyn, ym mhob gweithle dan eich rheolaeth chi.

Mae gan yr holl staff gyfrifoldeb i hyrwyddo lefelau uchel o ofal cwsmer yn eu maes cyfrifoldeb eu hunain.

Disgwylir i ddeiliaid swydd gydweithredu â'r broses Adolygu Datblygiad Proffesiynol, neu gyfwerth gyda Ruth Lee, gan gymryd rhan wrth osod amcanion er mwyn cynorthwyo gyda monitro perfformiad a datblygiad yr unigolyn.

Dyletswyddau perthnasol eraill sy'n gymesur â gradd y swydd, a all gael eu neilltuo gan y Rheolwr, mewn cytundeb â deiliad y swydd. Ni ddylid gwrthod cytundeb o'r fath yn afresymol.

Mae'r cyfrifoldebau allweddol sydd wedi'u cynnwys yn y swydd ddisgrifiad hwn yn rhoi argraff, ac nid yn gynhwysfawr. Gellir addasu dyletswyddau a chyfrifoldebau mewn trafodaeth â deiliad y swydd.

## **Adolygu:**

Mae hwn yn ddisgrifiad o'r swydd ar adeg ei chyhoeddi. Arfer y Brifysgol o bryd i'w gilydd yw adolygu a diweddarau swydd ddisgrifiadau er mwyn sicrhau eu bod yn adlewyrchu natur gyfredol y swydd a gofynion y Brifysgol yn gywir ac i ymgorffori unrhyw newidiadau rhesymol pan mae angen, mewn ymgynghoriad â deiliad y swydd.

# Manyleb Person

**Teitl y Swydd:** Datblygwr Systemau Realiti Estynedig (AR) /Realiti Cymysg (MR) - Swyddog Cyswllt KTP

Er mwyn cael eich rhoi ar y rhestr fer rhaid i chi arddangos eich bod yn bodloni'r holl feini prawf hanfodol a chymaint o'r meini prawf dymunol ag sy'n bosib. Pan fydd gennym nifer fawr o geisiadau sy'n bodloni'r holl feini prawf hanfodol, byddwn wedyn yn llunio'r rhestr fer gan ddefnyddio'r meini prawf dymunol.

## Meini Prawf Dethol

Priodoleddau		Eitem	Meini Prawf Perthnasol	Dull Adnabod	Pwysigrwydd
1	Sgiliau a Gallu	1.1	Sgiliau cyfathrebu rhagorol	Ff/C	H
		1.2	Safonau uchel o ran sgiliau trefnu, proffesiynoldeb ac ymrwymiad	Ff/C	H
		1.3	Sgiliau rheoli prosiectau TG	Ff/C	H
		1.4	Sgiliau creu a chyflwyno cyflwyniadau	Ff/C	H
		1.5	Sgiliau ysgrifennu adroddiad da yng nghyd-destun methodoleg datblygiad meddalwedd	Ff/C	H
		1.6	Yn gyfarwydd â sganio 3D a ffotogrametreg	Ff/C	D
		1.7	Sgiliau arwain a throsglwyddo gwybodaeth	Ff/C	D
2	Gwybodaeth Gyffredinol ac Arbenigol	2.1	Sgiliau datblygu Meddalwedd rhagorol yn defnyddio ieithoedd cyfredol (C++, C#)	Ff/C	H
		2.2	Peiriannau Gemau (Anwir neu Undod, mae cael y ddau'n fuddiol)	Ff/C	H

		2.3	Profiad o ddatblygu AR/MR Stiwdio Weledol	Ff/C	H
		2.4	Gwybodaeth gref am arferion safon y diwydiant sy'n gysylltiedig â datblygiad AR/MR, yn cynnwys defnyddio arferion datblygu ystwyth	Ff/C	H
		2.5	Yn gyfarwydd â setiau offer datblygu AR/MR (er enghraifft, Vuforia, ARKit, ARCore, ARToolkit, MRTK)	Ff/C	H
3	Addysg a Hyfforddiant	3.1	Gradd Fagloriaeth mewn Gwyddoniaeth Gyfrifiadurol/ Datblygiad Meddalwedd neu bwnc tebyg	Ff/T	D
		3.2	Cymhwyster ôl-radd	Ff/T	D
4	Profiad Perthnasol	4.1	Profiad o ddefnyddio offer a thechnegau'r diwydiant ar gyfer datblygu swyddogaethau 3D Estynedig/Tafluniedig	Ff/C	H
		4.2	Profiad o brofi a gwerthuso	Ff/C	H
		4.3	Profiad o reoli prosiect	Ff/C	H
		4.4	Dylunio a Datblygu Rhyngwyneb Defnyddiwr	Ff/C	H
		4.5	Profiad o ddatblygu ased 3D o fewn Maya/Blender, yn cynnwys setiau offer creadigol eraill (e.e. Adobe, Autodesk)	Ff/C	D
		4.6	Yn gyfarwydd â HMD, megis HoloLens a/neu Varjo XR-3	Ff/C	D
5	Gofynion Arbennig	5.1	Y gallu i gyfathrebu yn Gymraeg	Ff/C	D
<b>Dyddiad Adolygu</b>					

<b>Allwedd</b>	<b>Dull Adnabod</b>	<b>Ff</b>	Ffurflen Gais
		<b>C</b>	Cyfweliad
		<b>P</b>	Prawf
		<b>T</b>	Copi o Dystysgrifau
		<b>Rh</b>	Rhoi Cyflwyniad
		<b>G</b>	Asesiad Grŵp
	<b>Pwysigrwydd</b>	<b>H</b>	Hanfodol
		<b>D</b>	Dymunol

# Job Description

<b>Faculty/Department</b>	Faculty of Social and Life Sciences
<b>Section</b>	Simulation
<b>Job Title</b>	AR/MR Systems Developer (KTP Associate)
<b>Vacancy No</b>	2122701
<b>Reports To</b>	Senior Lecturer in Simulation and Digitisation with WGU and Host company supervisor

## Principal Accountabilities

This appointment is made as a result of the approval of a KTP Partnership with Ruth Lee Ltd.

Ruth Lee are a world-leading manufacturer of life-like manikins and training aids. They currently supply training manikins to 100% of Fire & Rescue Services (FRS) across the UK, and have thousands customers in the other emergency services world-wide.

The KTP will embed new to sector mixed reality/immersive technology capabilities into Ruth Lee to offer a revolutionary training product.

This exciting role will project manage the delivery of the technical and knowledge transfer objectives set as part of the project. They will work with and utilise the expertise within Wrexham Glyndwr University to embed key software, and mixed reality technology knowledge into Ruth Lee for future product delivery capability and development.

The role holder will be based primarily at Ruth Lee in Corwen, with flexibility to work through a hybrid working arrangement, with the opportunity to work within the university on an ad hoc basis.

The KTP Associate will hold a degree in software development or a related subject, or have extensive experience in a relevant area.

The role holder will also have proficiency in or willingness to learn relevant data analytics, web technologies, server management and user experience design techniques.

Experience in commercialisation, 3D asset creation, augmented and mixed reality design, and deployment of immersive technologies using game engines.

## Key Tasks

- Project manage the KTP partnership to ensure all agreed objectives and milestones are met, working with, and updating the work plan as agreed
- Apply AR/MR solutions that can be used to enrich and diversify the application of Ruth Lee's current product range.
- Work with company staff and the Knowledge Base Supervisor, to fully understand the background of the product idea and target audience to ensure a smooth development process
- Create requirements and specifications based on research both internally and externally, to ensure the best possible long-term results
- Coordinate discussions with stakeholders (including identified pilot group) to understand the requirements around system assimilation, functionality and operational usability needs for them.
- Build initial prototype of system, including required features for initial client discussions/pilot groups. Showcasing elements internally within Ruth Lee to aid in knowledge sharing of the development journey.
- Investigate new ways to incorporate technology rich solutions that diversify the commercial potential of the company's existing products.

## Special Features

- Flexible work hours, through remote and on-site working opportunities.
- This post is fully funded for 24 months through the provision of a KTP partnership grant in conjunction with Ruth Lee.
- Lead on the expansion of business opportunities in the development and delivery of new products, and if successful, shape the growth of the business infrastructure.
- £4000 worth of professional development set aside for the successful candidate during the first 24 months of the project.

## General Duties

It is the responsibility of employees to apply the University's Equal Opportunities Policy in their own area of responsibility and in their general conduct.



You will ensure that appropriate management systems and procedures are in place to meet your health and safety duties and responsibilities contained within the University's health and safety policy. In particular you will ensure that appropriate risk assessments are carried out in respect of significant hazards and that safety inspections are undertaken on at least an annual cycle in each workplace under your control.

All staff have a responsibility for promoting high levels of customer care within their own areas of responsibility.

Post holders are expected to co-operate with the Professional Development Review (PDR) process or equivalent with Ruth Lee, engaging in the setting of objectives in order to assist in the monitoring of performance and the development of the individual.

Such other relevant duties commensurate with the grade of the post as may be assigned by the Manager in agreement with the post holder. Such agreement should not be unreasonably withheld.

The key responsibilities contained in this job description are indicative not exhaustive. Duties and responsibilities may be altered in discussion with the post holder.

## **Review**

This is a description of the job at the time of issue. It is the University's practice periodically to review and update job descriptions to ensure that they accurately reflect the current nature of the job and requirements of the University and to incorporate reasonable changes where required, in consultation with the job holder.

# Person Specification



**Job Title:** AR/MR Systems Developer - KTP Associate

In order to be shortlisted you must demonstrate that you meet all the essential criteria and as many of the desirable criteria as possible. Where we have a large number of applications that meet all of the essential criteria, we will then use the desirable criteria to produce the shortlist.

Selection Criteria					
Attributes		Item	Relevant Criteria	Identification Method	Rank
1	Skills & Abilities	1.1	Excellent communications Skills	A/I	E
		1.2	High level of organization, professionalism and commitment	A/I	E
		1.3	IT project management skills	A/I	E
		1.4	Presentation creation and delivery skills	A/I	E
		1.5	Good report writing skills in the context of software development methodologies	A/I	E
		1.6	Familiarity with 3D scanning and photogrammetry	A/I	D
		1.7	Leadership and knowledge transfer skills	A/I	D
2	General & Specialist Knowledge	2.1	Excellent Software development skills using current languages (C++, C#)	A/I	E
		2.2	Game Engines (Unreal or Unity, beneficial to have both)	A/I	E
		2.3	Experience with AR/MR development Visual Studio	A/I	E
		2.4	A strong knowledge of industry standard practices associated with AR/MR development, including the use of agile development practices	A/I	E

		2.5	Familiarity with AR/MR development toolsets (for example, Vuforia, ARKit, ARCore, ARToolkit, MRTK)	A/I	E
3	Education & Training	3.1	Bachelor's degree in Computer Science/Software Development or related Subject	A/C	D
		3.2	Post graduate qualification	A/C	D
4	Relevant Experience	4.1	Experience of industry tools and techniques for Augmented/Projected 3D based application development	A/I	E
		4.2	Experience of testing and evaluation	A/I	E
		4.3	Experience of project management	A/I	E
		4.4	User Interface Design and Development	A/I	E
		4.5	Experience with 3D asset development within Maya/Blender, including other creative toolsets (e.g. Adobe, Autodesk)	A/I	D
		4.6	Familiarisation with HMD's, such as the HoloLens and/or Varjo XR-3	A/I	D
5	Special Requirements	5.1	Ability to communicate in Welsh	A/I	D
<b>Date of Revision</b>					

<b>Key</b>	<b>Identification Method</b>	<b>A</b>	Application Form
		<b>I</b>	Interview
		<b>T</b>	Test
		<b>C</b>	Copy of Certificates
		<b>P</b>	Presentation

		<b>G</b>	Group Assessment
	<b>Rank</b>	<b>E</b>	Essential
		<b>D</b>	Desirable