

Digital Solution Engineer - Digital Shoestring Unit

Full-time, 37.5 hours per week.

The Digital Manufacturing on a Shoestring Unit was a successful EPSRC funded research programme which devised an affordable, easy-to-implement approach to help manufacturers try out small-scale digital solutions that will not disrupt core operations, but which can provide immediate benefits.

A Digital Shoestring Unit has now been established to oversee the transition of the Digital Manufacturing on a Shoestring research project into a viable, self-sustaining industrial programme. The formation of the Unit is being funded by the Gatsby Charitable Foundation. In order for the Shoestring programme to transition from research into industry use, a number of key objectives have been identified:

In order for the Shoestring programme to transition from research into industry use, a number of key objectives have been identified:

- The establishment of a Digital Shoestring Unit to develop key offerings (training, membership etc) and support regions in developing their own local Shoestring programme
- An online portal giving access to the Shoestring configuration platform, pre-configured solutions, training and how-to guides, a community platform and installer directory
- Shoestring training programmes for SME manufacturers, service providers and apprentices
- Train-the-trainer programmes for teachers in FE colleges, apprentice training centres and similar, to allow at-scale UK wide dissemination of the Shoestring platform and approach.
- Enabling regional and international bodies to lead on Shoestring in their local region or country, including local pilot deployments

The Digital Shoestring Unit works directly with the IfM's Distributed Information and Automation Laboratory (DIAL) to achieve these key objectives.

The Digital Shoestring Unit is incorporated into IfM Engage, a company which is wholly-owned by the University of Cambridge. Profits from IfM Engage are gifted to the University of Cambridge to fund future research activities.

This is a 1-year fixed term contract role and is full-time. However, we are open to conversations around flexible working and operate a hybrid working policy. The salary band for this role is circa £39,000 plus a generous benefits package, including healthcare.

Role Summary

The Digital Solution Engineer has the following main responsibilities:

Solution design and build

- Design and build of low cost digital solutions, following the Shoestring technical architecture and design principles

Industrial deployment

- Working closely with businesses in the design and implementation of Shoestring solutions

Standard solution development

- Supporting the development of standard Shoestring solutions which can be deployed in multiple companies.

Reporting and Support

The Digital Solution Engineer will report to the Shoestring Business and Operations Lead for all line management and human resource purposes and on the delivery of Shoestring activities.

The role will work very closely with Shoestring Technical Development Lead and with the Research Programme Lead (within DIAL).

Role Description

	Key duties	Activities	Time*
1	Solution design and build	<ul style="list-style-type: none"> • Working with Shoestring Technical Lead and the broader DIAL research team to quickly come up to speed on Shoestring technical architecture and design principles. • Familiarisation with existing Shoestring solutions • Design and build of low cost digital solutions, initially implementing them as demonstrators at IfM 	30%
2	Industrial deployment	<ul style="list-style-type: none"> • Working closely with companies to help them deploy solutions • Matching priority industrial requirements to existing shoestring solutions where possible, and working with the wider shoestring technical team to support development of new solutions when required • Assessing effectiveness of the solutions, and ensuring lessons learnt are fed back to the wider team and incorporated in further solution iterations. • Working with regional and international deployment partners such as business support organisations and technical colleges to support wider roll out of Shoestring. • Working closely with the Shoestring Marketing and Engagement Lead to support development of industrial case studies. 	40%
3	Standard solution development	<ul style="list-style-type: none"> • Supporting the development of standard Shoestring solutions which can be deployed in multiple companies. • Developing clear and appropriate documentation for solutions • Exploring and specifying what is required in terms of solution adaptation and customisation • Supporting the development of training material for standard solution deployment 	30%

* Indicative

Person Specification

Criteria		Essential or Desirable
Qualifications	<ul style="list-style-type: none"> Degree level / level 6 vocational qualification or an equivalent level of practical experience. 	E
Experience	<ul style="list-style-type: none"> Relevant experience in developing systems with low-cost components Fully familiar with specialised electronics workshop activity and equipment e.g. micro computing platforms Raspberry Pi, Arduino; and software e.g. python. Understanding of wireless computing environments Experience of having worked in industry or knowledge of the manufacturing industry would be beneficial. 	E E E D
Skills	<ul style="list-style-type: none"> Ability to design, specify and manufacture, as appropriate, a range of electronic parts/systems to a high degree of precision Excellent communication skills including writing clear and appropriate documentation Strong organisational skills Ability to understand industrial problems and context, and translate into technical solutions. Ability to explain diverse technical and design problems to industry contacts and researchers. Good relationship management 	E E E E E D
Traits	<ul style="list-style-type: none"> Effective, friendly and professional communication style Willing to adapt Positive Organised Collaborative and enjoys being part of a team 	E E E E E

To apply for this role, please send your CV and covering letter to: Alison Martin, Senior Office Administrator ifm-engage@eng.cam.ac.uk Closing date: Sunday 16 April 2023

Applicants must have the right to work in the UK.

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