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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** |  |
| **Job family** | Education and Research |
| **Grade** | 7 |
| **Reporting to** | Dr Jérémy Bonvoisin |
| **Responsible for** | There may be a requirement for:day to day supervision of other staff e.g. technical staff or, co-supervision of doctoral or undergraduate students  |
| **Location** | University of Bath premises  |

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| **Background and context** |
| The Department of Mechanical Engineering at the University of Bath wishes to appoint a full-time Research Associate to work on an EU-funded Programme Grant. This interdisciplinary Programme called Open!Next is dedicated to support the emergence of Open Source Hardware as way to enable citizen participation in product and technology development. It involves 19 research and business partners from 7 European countries. Its aim is to develop the necessary infrastructure of IT solutions and services to enable SMEs to engage in company-community-collaboration for means of co-development and market exploitation of Open Source Hardware products and related services. Therewith, this Programme will contribute to the sustainable expansion of a societal movement leading to more ethical innovation, notably in terms of citizen empowerment and planned obsolescence. |

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| **Job purpose** |
| The Research Associate will support this exciting new research project through their skills in data science and analysis. They will be instrumental in developing a data-driven status report dashboard for Open Source Hardware projects. Developed as add-on to Git-based distributed version control systems, it will extract and process data in order to provide communities and businesses with key indicators of open source hardware project wealth. The Research Associate will also engage with and support wider research and management activities in the project.  |

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| **Main duties and responsibilities**  |
|  | Responsible to Dr Jérémy Bonvoisin for the following main duties:  |
| **1** | Participate in the development of data analysis methods based on state of the art knowledge in data-driven analysis of product development processes. Methods to be focussed on may depend on the profile of the candidate, e.g. Social Network Analysis, data mining, content analysis. |
| **2** | Design, plan and perform empirical data acquisition campaigns. Participate in the collection of a large corpus of Open Source Hardware repositories hosted in DVCS-based online platforms such as GitHub and Wikifactory. |
| **3** | Apply data analysis methods on the version histories of a large number of past and present open source hardware projects in order to clear patterns and success factors of open source hardware development. |
| **4** | Use insights gained from data analysis to develop a data-driven status report dashboard for Open Source Hardware projects. |
| **5** | Contribute to the design and execution of the project e.g. timetabling and meeting project milestones; participating in regular discussions with collaborative partners. |
| **6** | Writing up results of research and contributing to the publication of results in high-quality peer-reviewed academic literature. |
| **7** | Disseminating results of research project as appropriate to the discipline through activities such as* overseas research visits
* conference presentations
* public engagement activities
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| **8** | Participate in departmental/group meetings and prepare and deliver presentations/seminars to project team, internal and external stakeholders or funders. |
| **9** | Assist with the supervision of postgraduate students and undergraduate project students and the assessment of student knowledge. |
| **10** | Continually update knowledge and understanding in field or specialism to inform research activity. |
| **11** | Identify sources of funding and provide assistance with preparing bids to funding bodies. Develop ability to secure own funding e.g. travel grants.  |
| **12** | Contribute to the development of research objectives and proposals for own or joint research projects, with assistance of a mentor, if required. |
| **13** | Disseminate knowledge of research advances to inform departmental teaching. |
|  | You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.  |

**![logo-uob-resize[1]]() Person Specification**

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| **Criteria** | **Essential** | **Desirable** |
| **Qualifications** |  |  |
| A PhD degree in subject area of direct relevance for the project, or equivalent significant relevant experience and professional qualification | √ |  |
| **Experience/Knowledge** |  |  |
| Post doctoral experience |  | √ |
| Significant depth and breadth of specialist knowledge of subject matter to contribute to research programme | √ |  |
| Experience of computational data analysis and modelling methods, perhaps in another context | √ |  |
| Experience or strong background knowledge in engineering design and product development processes. |  | √ |
| Experience of leading or contributing to open source or other open projects |  | √ |
| Demonstrated potential to publish in high quality, peer reviewed journals | √ |  |
| Experience of interdisciplinary research environments |  | √ |
| **Skills** |  |  |
| Ability to synthesise existing knowledge | √ |  |
| Ability to prepare research proposals, to conduct individual research work and to disseminate results |  | √ |
| Ability to organise and prioritise own workload to meet required deadlines | √ |  |
| Ability to write research reports and to effectively disseminate outcomes | √ |  |
| Excellent oral, interpersonal and written communication skills | √ |  |
| Ability to use appropriate tools to systematically collect, transparently transform, analyse and present data (e.g. GraphQL, Python) | √ |  |
| **Attributes** |   |  |
| Commitment to working within professional and ethical codes of conduct | √ |  |
| Innovation and developing creative solutions  | √ |  |
| Commitment to excellence in research | √ |  |
| Interest for the topic of Open Source Hardware | √ |  |
| Enthusiasm and self-motivation | √ |  |
| Tenacity – working to achieve own and team objectives and to overcome obstacles  | √ |  |
| Ability to be an effective team worker | √ |  |
| Commitment to safe working practices | √ |  |