Off Grid Energy Ltd
Suite 7
Allerton Road Rugby
Warwickshire CV23 0PA

JOB DESCRIPTION - This post is part-funded by ERDF

General description of hybrid generators' data and software components

1. Get familiar with the hybrid generators produced by Off-Grid Energy, their software components and related data.

2. Gather all documentation (documents + software) relating to the data reporting collection, communication and reporting.

3. Create a new folder and file structure on the company's internal server for all software and related assets.

4. To keep a backup copy of the new folder and file structure to be updated weekly.

5. Create and follow a professional software version management strategy.

Modelling of generators' operation

1. Create a model of the different failure modes for the chosen type of generator. This is expected to take the form of a fault tree, and will be produced using documentation and knowledge available within the company

2. Convert the model produced into a probabilistic graphical model (a Bayesian network is recommended)

3. Use data sets already available to associate probabilities to the relevant nodes (failure modes, symptoms, observations) in the model produced.

Software development duties

1. Capturing requirements and understanding the expectations of Off-Grid in terms of data visualisation. These expectations relate to both the facilities provided by the current approach and Off-Grid's new requirements.

2. Developing an application that achieves the aims of visualising the data currently received by Off-Grid in a way that meets the requirements captured above.

3. Capturing requirements and understanding the expectations of Off-Grid in terms of prognostics capabilities: that is, alarms raised, format, timing etc.

4. Developing an interface to the probabilistic data model previously developed which enables: (1) reading the data produced in a continuous mode, (2) analysing the data and (3) providing the expected outputs.

In addition to these:

5. Ensuring release notes are accurate before authorising the builds of the software for release to the customer with new generators

6. User guide creation and updating

7. Compatibility testing

8. Collecting and fixing bugs

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Other skills and experience

- Education to degree level in a computer science related subject.

- Knowledge of Object Oriented development techniques.

- Experience of probabilistic data analysis.

- Exposure to XML, a software development framework (e.g..NET), a programming language such as C#, C++ or Java, and Windows Forms development.

- Ability to work under own initiative.

- Previous experience in a software development environment an advantage.

- Logging and tracking of issues in detected during test execution.

- Liaising with appropriate personnel to achieve resolution of issues identified.

- Perform analysis of issues in order to diagnose the area of fault and suggest a resolution