**Company: Velindre Cancer Care Services**

**Contact: Emma Powell**

**Briefly describe the idea or problem and discuss why this project is relevant and timely.**

Velindre Cancer Centre (VCC) provides specialist tertiary cancer treatments to the South East Wales population. There is increasing demand within the service to predict the service demand within VCC and its different outreach locations to enable the understanding and planning of capacity needed to meet this demand in its different locations. As part of the new Velindre Cancer Centre the review and planning of the outreach locations is being undertaken. This work aims to inform those decisions through provide Geospatial analysis of the current and forecast patients geographical distribution to enable optimal outreach locations. This will require the embedding of Geospatial date within dash boarding tools and producing drive time analysis to enable the optimal locations to meet the population to be tested and reviewed.

**What are the specific aims of this project?**

**The aims of the project:**

* Provide forecast demand information based the geographical locations of the patients
* Enable the capacity planning and the optimal outreach locations to provide the most benefit to the population
* Provide automated visual representation of Velindre’s patients, their travel times to different locations and forecasted growth with the different locations.
* Ability to identify cohorts of patients that are within locations that reduce the accessibility to VCC locations and who would benefit from more digital inclusions programmes

**What specific methodologies/skills/software are most important for this project?**

The project will require a number of different elements to be undertaken:

* Working with WG Data Maps Wales and Ordnance Survey to develop automated drive times and Dashboards that provide geospatial data and analysis.
* Linking in with the data warehouse and the analytical team to develop geospatial demand and capacity forecast models
* Linking in with the BI Development team to establish and embed the geospatial analysis within Service and performance Dashboards

**Do you envisage any barriers that may impact on the objectives of this project? For example, availability or access to data based on the current pandemic/working from home.**

To enable this project to be undertaken the links with Data Maps Wales or other technologies for drive time analysis need to be reviewed and the best solution utilised within the project. Links with Ordnance Survey staff and WG need to be developed and this is currently being undertaken.

There will be opportunity for the student to be based within the business Intelligence team for the duration of the project. The Trusts Data Warehouse is held within SQL databased there is a requirement that the student has SQL skills along with other languages such as R and python.

**Are there any eligibility requirements to undertake this work?**

This project is sensitive, and the successful student will need to sign an honorary contract with the Trust.

**Is the project suitable for a part-time student?**

Yes.