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| **MSc Data Science, Dept of Informatics**  **Project Proposal Form (2018-19)** | KCL_no UoL_letterhead_3#21D |

**Domain Advisor (non-Informatics):**

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| Surname: Lynch | Forename(s): Lucy |
| King's Affiliation (e.g., Department, Faculty) OR  Company: | Email:  Lucy.lynch@edensmith.co.uk |

**Project title:**

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| Water Network Modelling |

**Project description (include description of data and research questions to be addressed):**

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| (Southern Water)  A project is underway in the Rownhams area of Southampton to measure the behavior of the water network using an abundance (60+) of sensors. This is the first project of its type in the UK and is of significant interest to our regulators.  There are two objectives, the first is to find evidence in the sensor data that could explain the causes of discolouration incidents and secondly to understand what normal looks like.  Analyze the sensor data along with Southern Water network configuration data and the extensive information. Use any additional open datasets that might provide additional insight.  Contact with the team running the project will be encouraged to help correlate the data with known events and event types.  Any visualizations are acceptable but geospatial is particularly helpful. Key areas of study  * Sensor data, network configuration, known events, customer complaint information * Data preparation, programming, data visualization * Azure Data Science VM and available tools including Python, SQL, R. |

**Deliverables (if any, in addition to standard progress reports and thesis):**

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| * Insight into the correlation sensor data and discolouration incidents. |

**Description URL (optional):**

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**Is any non-standard hardware/software required?**

 No  Yes