# **Job title:** Statistician (Rank 6) / Senior Statistician (Rank 7)

|  |
| --- |
| Main purpose |
| As a member of the Data Science Team, this role will support the whole company on both consultancy and research projects that require statistical modelling or analysis of data. Together with the rest of the team, it will drive key decisions in all relevant projects to be made based on solid data-driven evidence. In the longer run, this role will champion the company’s technical excellence in extreme value analysis, multivariate (joint probability) analysis, and other related areas.  |

|  |
| --- |
| Main duties |
| * Develop statistical models and apply common statistical techniques to study a wide range of datasets generated in water-related environmental processes such as storms, droughts, floods, etc.
* Work with colleagues from other scientific or engineering backgrounds in a highly collaborative environment and communicate findings efficiently to non-specialists to support decision making.
* Provide ad-hoc support to colleagues from a non-statistical background on tasks from basic (e.g. how to quantify the uncertainty of a prediction model based on a linear regression model) to higher complexity (e.g. how to estimate the probability of project delay / overspend using Monte Carlo integration).
* Develop and maintain company’s internal software for some commonly used statistical modelling approaches, e.g. an R package for estimating non-stationary extreme values.
* Support company’s business development activities (e.g. bid decisions and proposal preparation) by contributing technical expertise, formulating or evaluating the statistical components of the deliverables.
 |

|  |
| --- |
| Job specific duties |
| * Formulate questions derived from real-world engineering and design problems into a mathematical problem that can be answered using statistical analysis.
* Review and decide on modelling approaches independently or collaboratively depending on the complexity of the problem.
* Perform exploratory data analysis on the raw input data and carry out data cleaning or other pre-processing tasks.
* Develop statistical models or perform data analysis in a suitable programming language (e.g. R or Python) with good practice of coding (documentation and source control).
* Communicate findings to non-specialist colleagues and clients by means of presentations, technical notes, or written reports.
* Opportunities to take on additional duties in other aspects around company’s core consultancy business, e.g. project management, business development, etc.
 |
| Group | Flood and Water Management |
| Reports to | Ye Liu |
| Responsible for | n/a |
| Date agreed | 2024-08-06 |