**Heriot Watt University and DIAGEO Scotland Limited**

**Role: Research Scientist – Whisky Maturation Analysis and Data Science (KTP Associate)**

**KTP number 13452**

**36-month fixed term contract (potential for permanent position)**

**Salary: £37,474**

**Role will be based full time with Diageo at the Global Technical Centre, Menstrie, Scotland.**

Heriot-Watt University has established a reputation for world-class teaching and leading-edge, relevant research, which has made it one of the top UK universities for innovation, business, and industry.

Heriot-Watt University has five campuses: three in the UK (Edinburgh, Scottish Borders, and Orkney), one in Dubai and one in Malaysia. The University offers a highly distinctive range of degree programmes in the specialist areas of science, engineering, design, business, and languages. Heriot-Watt is also Scotland's most international university, boasting the largest international student cohort.

**Detailed Description**

Heriot-Watt University and Diageo Scotland Ltd. are seeking a KTP Associate for a collaborative project to develop a platform for integrating data sciences and analytical methods with human sensory input that will enable prediction of the outcome of whisky maturation in wooden casks. The position will be based at the Diageo Technical Centre, Glenochil, Menstrie, Clackmannanshire. Diageo Scotland Ltd.’s principal activities are the distillation, warehousing, maturation, bottling and packaging of Scotch whisky and other spirits and distribution to fellow group undertakings and third parties. The company performs manufacturing services on behalf of several Diageo brand owning companies.

The post will involve working with colleagues at Heriot-Watt University and Diageo Scotland Ltd. to develop our understanding of the complexity of whisky maturation through integration of chemical analysis of barrels and spirit (identifying key chemical signatures) with sensory data relating to barrel preparation (from coopers) and from maturing spirit (from distillers and blenders) within a machine learning environment that will ultimately be used to support prediction of the flavour and quality outcomes of maturation. Integrating quantitative physico-chemical analytical data with sensory data within a data analytics approach is novel and represents the central challenge of the blend of craft and science that is necessary to drive this project.

**Key Duties and Responsibilities**

1. Conduct and manage research and related administrative activities, with guidance as required, ensuring that project aims, and objectives are met.
2. Working closely with the supervisory team, develop and plan research objectives.
3. Present information on research progress and outcomes to, for example, project lead, funding body, university research committee, research team, *etc.*
4. Build appropriate networks within and outside the team.
5. Where needed, travel to partner universities (research collaborators) to carry out research and/or attend meetings presentations *etc.*
6. Publish research reports, conference, and indexed journal papers in line with project requirements.
7. Support dissemination and contribute to technical workshops, seminars, and conferences as appropriate.
8. Support public engagement activities through web-based and social media-based methods as appropriate.
9. Ensure that all data collection undertaken as part of the project is done so ethically and in line with UK (GDPR) privacy and data protection policies, and in compliance with the requirements of the funder.
10. Undertake training activities as necessary and agreed with the supervisory team to deliver on the project aims and objectives and for career development.
11. Provide tutoring and assist in the supervision of PhD candidates and undergraduate/postgraduate student research projects as necessary.

Applicants should note that the Intellectual property generated as part of this research will belong to Diageo Scotland Ltd.

*Please note that this job description is not exhaustive, and the role holder may be required to undertake other relevant duties commensurate with the grading of the post and its general responsibilities.  Activities may be subject to amendment over time as the role develops and/or priorities and requirements evolve.*

**Education, Qualifications and Experience**

Candidates should have a minimum of an Enhanced Undergraduate Degree (MSci, MChem, MPhys) or Master's Degree (MSc) in Chemistry, Physics, Analytical Science, or related Physical Science Disciplines. Ideally, candidates should have a PhD in Analytical Science with experience in data analytics.

With roles in research, practical application, database development and machine learning as well as knowledge sharing, the candidate will be required to have significant practical experience, and integrated knowledge of data and analytical sciences. Experience in handling complex data sets is essential. Flavour/Sensory Analysis experience desired. Coding experience will help with the data science integration.

Candidates will be required to work meticulously in data gathering to develop robust mechanisms for research in addition to developing readily accessible methodologies. The candidate must be able to work well independently but also be able to work within a team and display the ability to convey detailed information in an articulate and enthusiastic manner.

**Essential Criteria**

* Enhanced Undergraduate Degree (MSci, MChem, MPhys) or Master's Degree (MSc) in Chemistry, Physics, Analytical Science, or related Physical Science Disciplines.
* Significant practical experience in analytical science, and an integrated knowledge of data and analytical sciences.
* Experience in experimental design, and in handling large and complex data sets.
* An ability to conceptualize problems and develop well-reasoned and logical viewpoints.
* An ability to convey detailed information in an articulate and enthusiastic manner.
* Will be required to work meticulously in data gathering to develop robust mechanisms for research in addition to developing readily accessible methodologies.
* Proficient in Microsoft Office Software (Microsoft Word, Excel, PowerPoint), Scientific Data Analysis and Graphing Tools and other relevant computer-based tools used in a modern research environment.
* Fluent (verbal and written) in English.
* Hardworking, proactive, willing to learn new things.
* Must be able to work well independently but also be able to work within a team and with the public.
* Flexible, self-motivated, and able to plan his/her own work.
* Good interpersonal and supervisory skills.

**Desirable Criteria**

* PhD in Analytical Science with experience in data analytics applied to analytical science
* Coding experience will help with the data science integration.
* Flavour/Sensory Analysis experience.

**‘How to Apply’**

Applications can be submitted up to midnight (UK time) on date Tuesday 21st March 2023. Interviews will take place during the week commencing 10th April 2023.

Please must submit via the Heriot-Watt on-line recruitment system (1) Cover letter describing their interest and suitability for the post; (2) Full CV (includes the list of publications)

Heriot-Watt University is committed to securing equality of opportunity in employment and to the creation of an environment in which individuals are selected, trained, promoted, appraised, and otherwise treated on the sole basis of their relevant merits and abilities. Equality and diversity are all about maximising potential and creating a culture of inclusion for all.

Heriot-Watt University values diversity across our university community and welcomes applications from all sectors of society, particularly from underrepresented groups. For more information, please see our website <https://www.hw.ac.uk/uk/services/equality-diversity.htm> and also our award-winning work in Disability Inclusive Science Careers <https://disc.hw.ac.uk/> .

We welcome and will consider flexible working patterns, e.g., part-time working and job share options.

Use our total rewards calculator: <https://www.hw.ac.uk/about/work/total-rewards-calculator.htm> to see the value of benefits provided by Heriot-Watt University.