

Post Details		Last Updated: 03/04/2020	
Faculty/Administrative/Service Department	School of Veterinary Medicine		
Job Title	Data Engineer		
Job Family	Professional Services	Job Level	4
Responsible to	Strategy and Delivery Manager		
Responsible for (Staff)	N/A		
<b><u>Job Purpose Statement</u></b> This role exists to build several exciting new initiatives (including a data hub) around animal health in collaboration with the world's largest animal health pharmaceutical company, amongst others. The job will straddle across innovative industries in both the academic and commercial worlds.			
<b><u>Key Responsibilities</u></b> This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum)			
<ol style="list-style-type: none"> <li>1. Planning, creating and maintaining optimal data pipeline architecture.</li> <li>2. Assemble large, complex data sets.</li> <li>3. Identify, design, and implement internal process improvements: automating manual processes, optimizing data delivery, re-designing infrastructure for greater scalability, etc.</li> <li>4. Build the infrastructure required for optimal extraction, transformation, and loading of data from a wide variety of data sources using SQL and Microsoft Azure.</li> <li>5. Build analytics tools that utilize the data pipeline to provide actionable insights into customer acquisition, operational efficiency and other key business performance metrics.</li> <li>6. Investigating and interpreting requirements during discussions with stakeholders to formulate designs and descriptions of technical functionality.</li> <li>7. Work with data and analytics experts to strive for greater functionality in our data systems.</li> <li>8. Collaborating with stakeholders and partners, internally and externally, to develop funding proposals and achieve project goals.</li> <li>9. Investigating and interpreting requirements and use cases during meetings and discussions with stakeholders to formulate designs and descriptions of technical functionality.</li> </ol> <p><b>N.B. The above list is not exhaustive.</b></p>			
<b>All staff are expected to:</b> <ul style="list-style-type: none"> <li>• Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy.</li> <li>• Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.</li> <li>• Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions.</li> <li>• Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role.</li> <li>• Undertake such other duties within the scope of the post as may be requested by your Manager.</li> <li>• Work supportively with colleagues, operating in a collegiate manner at all times.</li> </ul> <b>Help maintain a safe working environment by:</b> <ul style="list-style-type: none"> <li>• Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.</li> <li>• Following local codes of safe working practices and the University of Surrey Health and Safety Policy.</li> </ul>			
<b><u>Elements of the Role</u></b>			
<b><u>Planning and Organising</u></b> <ul style="list-style-type: none"> <li>• The post holder will be responsible for investigating and defining the work that makes up milestones that are recorded in the funding proposal documents.</li> <li>• The post holder will also be responsible for breaking down, planning, and reviewing the sprints that take place during the development phase.</li> </ul>			
<b><u>Problem Solving and Decision Making</u></b> <ul style="list-style-type: none"> <li>• The post-holder will be expected to use their data engineering expertise to investigate, understand and resolve technical issues whilst testing and debugging, and providing a range of viable solutions to the issues.</li> </ul>			

<p><b><u>Continuous Improvement</u></b></p> <ul style="list-style-type: none"> <li>The role requires a sound knowledge of building and optimizing data pipelines, architectures and data sets. The post-holder will be expected to keep their knowledge of key technology advancements current. Funding for optional additional training may be available.</li> </ul>		
<p><b><u>Accountability</u></b></p> <ul style="list-style-type: none"> <li>The "post-holder" will be accountable for manipulating, processing and extracting value from large disconnected datasets, and must keep all stakeholders informed of delays or timescale modifications, to ensure that projects can be organised and run efficiently.</li> </ul>		
<p><b><u>Dimensions of the role</u></b></p> <ul style="list-style-type: none"> <li>The post holder will be expected to organise their work independently and deliver updates to the team.</li> <li>The post holder will be required to communicate any problems or issues of a technical nature, to team members of a widely varying technical background.</li> <li>The role requires no management of contracts or budgets.</li> </ul>		
<p><b><u>Supplementary Information</u></b></p> <ul style="list-style-type: none"> <li>The post-holder will be given significant opportunity to learn new skills and develop their own portfolio of programme mastery and will be expected to come to their line manager with self-motivated initiatives and opportunities to expand their knowledge and the department's overall usefulness.</li> </ul>		
<p><b>Person Specification</b></p>		
<p><b>Qualifications and Professional Memberships</b></p>		
<p>Professionally qualified with a relevant degree/postgraduate qualification, plus significant relevant managerial experience and leadership experience, or substantial experience and proven success in a strategically important specialist area;</p> <p>Or</p> <p>Extensive vocational and strategic management and leadership experience demonstrating professional development through involvement in a series of progressively more demanding and influential work/roles, backed by evidence of significant development</p>		E
<p><b>Technical Competencies (Experience and Knowledge)</b> This section contains the level of competency required to carry out the role (please refer to the Competency Framework for clarification where needed and the Job Matching Guidance).</p>	<b>Essential/ Desirable</b>	<b>Level 1-3</b>
Experience with Azure Data Factory, Azure Analysis Services, PowerBi, and DAX	E	3
Experience with relational SQL and NoSQL databases	E	3
Experience with AWS/Azure cloud services (Microsoft Azure technologies eg. Azure SQL / Data Factory / Azure DWH)	E	3
Ability to develop business cases and conduct requirements/business analysis	D	N/A
Experience with Python, R and C#	D	N/A
Knowledge and experience of architectures to support advanced analytics and data science	D	N/A
Working with animal health data	D	N/A
A portfolio of work that relates to data insight extrapolation in the health sciences	D	N/A
<p><b>Core Competencies</b> This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade.</p>		<b>Level 1-3</b>
Communication		2

Adaptability / Flexibility	2
Customer/Client service and support	2
Planning and Organising	3
Continuous Improvement	3
Problem Solving and Decision Making Skills	3
Managing and Developing Performance	1
Creative and Analytical Thinking	3
Influencing, Persuasion and Negotiation Skills	2
Strategic Thinking & Leadership	2

Should significant changes to the Job Purpose become necessary, the post holder will be consulted and the changes reflected in a revised Job Purpose.

### **Organisational/Departmental Information & Key Relationships**

#### **Background Information**

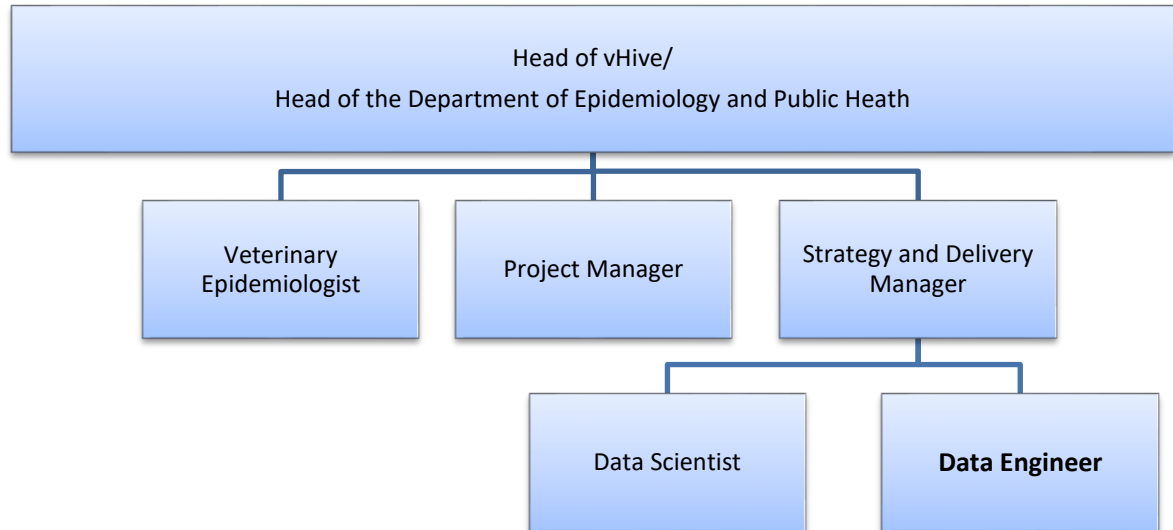
vHive is a unique partnership between the University of Surrey and Zoetis Centre for Digital Innovation, supported by a significant co-investment dedicated to the development and adoption of new digital technologies in animal health.

This new centre utilises transformational digital and data analytics tools to advance the wellbeing of domestic animals. Digital technologies including but not limited to wearables, apps, sensors and satellites promise to transform real-time information capture for animal owners and their veterinary advisors. Access to Big Data and engagement with the emerging Internet of Things will lead to new opportunities in research, business and education. This will enable improved understanding of animal health and early identification of problems in an analogous manner to eHealth for people.

The vHive initiative focuses on two themes:

- Digital technology development, including monitoring devices of animals' wellbeing
- Big data analytics to deliver vital information to all stakeholders in the animal health community.

### Department Structure Chart



**Relationships** *This is not an exhaustive list of every relationship the post holder has, but is a brief description of those that play an important part in the post holder successfully carrying out the role. It should identify the significant internal and external relationships and contacts that the post holder has in their job and describe the overall purpose and nature of those relationships (i.e. exchanging information, negotiating, networking, etc.)*

#### **Internal**

- Academic/Research Staff
- Centre for Vision, Speech and Signal Processing
- IT Support Staff

#### **External**

- Public Health England
- Zoetis
- ATC

**N.B. The above list is not exhaustive.**