

## Data Scientist

**Location:** Madison, WI  
**Type:** Full time, permanent  
**Job Ref #:** SYN-SDAS-11/21  
**Reporting to:** Haja Kadarmideen, CTO

### Introduction

Synomics is transforming agri-food and companion animal industries by improving animal and crop health and production efficiency, and the economics and sustainability of the entire production value chain for multiple species.

Our platform is a revolutionary advance in the analysis of high-throughput multiomic (genotype, phenotype, transcriptome microbiome, metagenome, epigenetic) and environmental data to accurately analyse and predict key relevant disease and performance traits, and deliver healthier plants and animals and more sustainable food production. Our technologies are equally applicable to pet health and nutrition.

We're a rapidly growing AI-enabled genomics, breeding and precision agriculture company with international offices, global ambition and partnerships with some of the largest international breeding companies and research institutes.

We are headquartered in Oxford, UK with offices in Copenhagen, Denmark and Madison, WI. We were founded by a diverse team of highly experienced animal production & health, genomics, breeding, bioinformatics and AI leaders. Our main investor is Wheatsheaf Group Ltd, part of the Grosvenor Estate, which directly operates, invests in and helps develop innovative businesses in the food and agriculture sectors ([www.wheatsheafgroup.com](http://www.wheatsheafgroup.com)).

We have a fantastic opportunity for a data scientist to join our team, reporting to our CTO, Professor Haja Kadarmideen. We are looking for someone with a broad domain understanding who is comfortable working with data science (AI/ML), building analysis pipeline and products in agri-genomics or multiomic domain across a range of species (livestock, crops, pets, humans). The ideal candidate will have relevant expertise and experience in data science, high performance computing and/or CUDA computing ,

advanced programming, and database skills. Preferably has some knowledge in bioinformatics and computational biology.

The successful candidate will be working within the R&D / Technology division of the company and will be key underpinning capability to assist geneticists, animal / crop breeding specialists, bioinformaticians, biostatisticians and computational biologists in their core tasks across commercial projects, R&D projects and software product developments. He / she will support the CTO to build, automate and maintain data analysis pipelines at scale as well as in the application of advanced analytical methods in technology and product roadmaps and subsequent development as required.

This is an exciting opportunity to help shape the direction of the business as a key member of the team and to help accelerate technology change, improve animal/plant/fish production and reproduction efficiency, health & welfare and reduce carbon emissions across a globally significant industry.

Due to the type of work we undertake, a high proficiency in life science and biotechnology is required. The ideal candidate will have demonstrable, commercial software development experience.

## Responsibilities

- Building and maintaining data analysis pipelines at scale using a range of tools and technologies and identifying opportunities for future innovation of agri-genomics and phenotype data exploration practices
- Working within the company's domain areas (e.g. target discovery, biomarkers, breeding data, bioinformatics, genomics, agri-informatics), design, code, test, correct and document computer programs and scripts using agreed standards and tools.
- Work with big data collected continuously using advanced machinery (e.g. automatic feeders, video cameras, thermal image captures etc) or life science/biotechnology platforms (genome sequencing or metabolomics or proteomics).
- Work with relational and non-relational databases in life or agricultural sciences.
- Manage continuous large-scale import and export of datasets from our partners with due care for privacy requirements for both the incoming or outgoing data, including encryption and anonymizing the datasets
- Perform secure storing and accessing, reprocessing the historical data, updating the existing databases with new incoming datasets
- With data science tools, be responsible for the QA/QC, preparation and analysis and visualisation of datasets.

- Contribute to the identification and/or development of new data sciences / analytical methods for building best products in commercial environment and help in creating insight and value from complex datasets
- Use good communication of technical and analytical subjects between different specialities within the business, with outside partners and with customers to bring best practice and methodologies to the QC of data and results
- Working with CTO and other members of the exec team, ensure IP opportunities arising from research are identified
- Act as an expert internally and externally in relation to the data science areas, automation and company products
- In collaboration with CTO, write-up and publish new methods and results
- where appropriate, to provide mentorship and advise in data science to the wider company

Due to the nature of our business, this job description is not exhaustive and will be subject to change to meet the changing needs of the business.

### Key Requirements

- MS/MSc. or Ph.D. in computer science, data science, applied mathematics or statistics or a relevant technical field, or 3+ years' experience in a relevant role
- In-depth knowledge and vast experience with R, Python, C++ and other programming languages and ability to use them in data processing pipelines and algorithm application/development
- Solid knowledge and experience in use of machine learning/AI methods for big data integration, analysis and visualisation,
- Experience in applied statistics (ideally biostatistics), modelling, quality assessment/control, data exploration, and clustering techniques
- Database skills, preferably relational databases (MS Access/SQL) in design, maintenance, query and performance
- Ability to develop software / algorithms for processing and statistical analyses in proof of concept and commercial projects
- Experience in parallel programming models, Linux or HPC clusters, and/or CUDA computing and preferably also in GPU computing
- Ability to solve analytical problems using quantitative approaches
- Knowledge of developing (in addition to applying) computational tools and algorithms in the fields of bioinformatics, machine learning, statistics or other related field

## Key Attributes

We're looking for a highly-motivated individual who thrives working in a high-paced, flexible environment, is inspired by the opportunity to make a difference to the world and possesses the following attributes:

- Good communication and presentation skills with fluent English (min. of equivalent of CEFR level C1)
- Confidence to make suggestions and influence change
- Ability to work well to deadlines, while paying attention to detail and accuracy
- Ability to work in a diverse team of geneticists, data scientists, bioinformaticians, breeding specialist, software / IT specialists and business support across multiple domains/species
- Strong customer service focus and the ability to build close working relationships
- Flexible approach to working
- Personal integrity and discretion

## What We Offer

- Competitive salary
- Healthcare plan, 401k and other related benefits
- Above-average holiday and benefits packages
- Excellent career development opportunities in a fast-growing international organisation

## Application Process

- Please submit cover letter, your CV, and publication list (if relevant) to [synomics@singulartalent.io](mailto:synomics@singulartalent.io)
- This position is available for immediate start after interviews

Please mention the job reference number in the cover letter and subject line of your email when applying.

Synomics is a collaboration between Wearsheaf Group Ltd and PrecisionLife Ltd. Wearsheaf Group directly operates, invests in and helps to develop businesses in the food and agriculture sectors. PrecisionLife is an AI enabled precision medicine company, which is ISO27001 accredited, committed to equal opportunities and operates a carbon neutral business. To learn more, visit:

<http://www.synomics.ai/>, <https://www.wearsheafgroup.com/> and <https://precisionlife.com/>.

In the United States we follow the right to work criteria as derived from the Department of Homeland Security and you will therefore need to satisfy basic eligibility criteria and provide appropriate original documentation as required. Any offer of Employment is contingent on receipt of such documents.

In the UK and EU we follow the EU right to work employment checks and you will therefore need to satisfy basic eligibility criteria/certain conditions of employment (e.g. nationality rules/right to work in EU / UK); and provide appropriate original documentation to verify ID, nationality, employment and/or academic history.

Synomics is fully committed to equal opportunities.

Here's a link to our privacy policy- <http://www.synomics.ai/privacy-and-cookies-policy/>

In this policy, you will find information about our compliance with GDPR (data protection law.) You can find how to send us a request to let you access your data that we have collected, request us to delete your data, correct any inaccuracies or restrict our processing of your data. You have the right to lodge a complaint about the way we handle your data with supervisory authority or you can contact our DPO at [GDPR@synomics.ai](mailto:GDPR@synomics.ai) for more information or concerns. We process this data for recruitment purposes only. We store all candidate data in secured file with restricted access, and we will not share it with anyone else.