JAMIE ROBERT SYKES

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Skills

Key skills in Science:

- Machine learning & Computer vision
- Conservation biology & Agronomy
- Quantitative genetics & genome analysis
- Languages & software: R, MATLAB, Python, Tensorflow & Pytorch
- Bayesian & maximum likelihood statistics
- Genetic- & Phylogenetic mixed models
- Invertebrate and plant taxonomy

Practical skills:

- Experience leading small teams
- Mechanical, hydraulic & electrical repair, & maintenance
- Heavy machinery & off-road vehicle operation
- Experience working in extreme environments and with multicultural teams
- Basic Spanish

About Me

While studying for a National Diploma in animal management, I became fascinated by the study of farmland ecology and conservation. Since then I have worked to educate myself on subjects that would allow me to become a productive and well rounded member of these fields.

For over ten years, I have worked diligently at my career in agriculture, which has funded my education and bestowed on me invaluable practical skills and knowledge in crop science, farmland ecology and botany.

Having completed my MSc. in Genetic Analysis, I have gone on to educate myself further in data science and machine learning. Now, after working as an agronomist for three years and beginning my PhD., I feel confident that I am achieving what I set out to and more.

Education

MSc. Quantitative Genetics & Genome Analysis | 2015-2017 | The University of Edinburgh

Linkage & Association in Genome Analysis (B), Bioinformatics (B), Molecular Phylogenetics (B), Population & Quantitative Genetics (B), Research Project (Dissertation) (B), Research Project Proposal (B)

I paid for my Master's Degree almost entirely by my own means. This made this notoriously challenging degree even more difficult, yet I was able to overcome this challenge.

BSc. Conservation Biology | 2011-2015 | Plymouth University, UK
With one year at the University of Alaska southeast with the International Student Exchange Programme

Grade: Bachelor of Science with Upper Second Class Honours.

Dissertation (A), Plant Biotechnology (B), Sustainable Forest Ecosystems (B), ArcGIS (A), Population Viability Analysis (B), Species Distribution Modeling (B), Animal Behavioral (B), Ecology (B), Invertebrate natural history (B)

National Diploma in Animal Management | 2007-2009 | Riseholme College, UK

Triple award: Distinction, Merit, Merit

Employment

PhD. Computer Science | University of York | October 2021 - Present

My self designed project concerns the application of machine learning and computer vision in detecting and controlling fungal disease in cocoa trees. With the help of partners in academia and industry, this ethical computing project aims to increase stability in the cocoa industry by providing cutting edge tools to cocoa farmers and agronomists.

So far this project has been a great success with much progress being made in model development and many offers of support form the cocoa industry. Having recently had my three month These Advisory Panel meeting, I have been told that my work so far is excellent and exceeds expectations.

Trials agronomist | NIAB | November 2018 - September 2021

Key Responsibilities:
- Establish and manage field trials of various crops
- Assess plots for a range of agronomic characteristics
- Validate and analyse data
- Manage a range of equipment and facilities

Achievements:
- Promptly completed all of my annual objectives
- Quickly learned the system behind field trials at NIAB, Benniworth
- Worked with our internal training department to create a course on Managing Farmland Biodiversity
- Assisted coworkers with- and streamlined data analysis and statistics problems

Skills acquired:
- Gained my PA1 & PA6 safe use of pesticides certificate.
- Learned much about agronomy and crop disease identification and management.

Grain store manager & Farm worker | Dennis Estates | 2013-2018

Trainee Ecologist | ECOAN: Asociacion Ecosistemas Andinos & Plymouth University | 2014

Key Responsibilities:
- Design and implement studies to conserve high-altitude giant rosette plants, *Puya spp.*
- Act as an ambassador of Plymouth University to ECOAN & forging a new working relationship with the Huascaran National Park

Achievements:
- The Huascaran National Park took on two students from Plymouth University the following year. Such work continues today
- In my final report, the Head of the ECOAN office in Huaraz gave me great praise on my work ethic, work quality, stamina and self sufficiency

Skills acquired:
- Experimental design and spacial distribution and demography data analysis
- Field navigation, use of GPS equipment & satellite image interpretation
- Experience working in adverse weather conditions and at high altitude

Volunteering Experience

Alaska Department of Fish & Game
Here I worked to help track and monitor wild salmon using radio telemetry and GPS equipment. I also helped to catch and take tissue samples from wild fish at a NOAA weir.

Tenikwa Wildlife Awareness & Rehabilitation Centre, South Africa.
Roles included animal husbandry and rehabilitation, facilities maintenance and guiding tours of the park. I worked mainly with big cats such as cheetahs, leopards, caracal and serval but also with several other species such as African penguins, marketeers and primates including vervet moneys and marmosets.

Banovallum veterinary group
I worked to keep the operating rooms, drug dispensary, kennels and other facilities clean and well organised. I assisted and observed vets during surgery and farm visits and I worked in the office, filing and organising records.