

Optical Systems Engineer at VeriVin

VeriVin Ltd.

About VeriVin

VeriVin is an innovative startup working on the through-barrier spectroscopic analysis of complex liquids in sealed containers. VeriVin is developing a tool which allows for the unique spectroscopic ID tags of a given batch of complex liquids (oil, honey, milk, wine, whisky and so on) to be uploaded onto a database, analysed and used for quality control and authentication. The spectroscopic ID tag of a sample can be contrasted with the ID tags of other similar samples, aiding to verify its expected quality and provenance. Differences in the fingerprint of the same sample over time can be used to gather information about the status and evolution of the sample - or its possible adulteration.

Our aim is to develop the largest database of spectroscopic data in the food and beverage industry (wines, spirits, olive oils, honey etc.) and be able to track the movement and authenticity of beverages all along the supply chain. We mean to extract meaningful conclusions from the spectral data acquired with our devices by breaking down and analysing millions of spectra using chemometrics and machine learning techniques. So far, VeriVin has focused on the food and beverage industry, but its technology is translatable to any industry in which the through-barrier analysis of complex liquids is applicable.

About the project

VeriVin is in the final stages of developing its first prototype and thus moving from an R&D phase to a commercial product development phase. Despite this, we are not abandoning the lab completely: we are constantly working on new technologies and improving our present system. For example, we are currently exploring the use of innovative optical methods to better exclude the contribution of the container signal from our measurements.

We are currently looking for a junior member of the Research and Engineering team that will support us in the development, assembly and testing of new devices. Regardless of your studies and background, we are looking for a hands-on person who does not fear to try unexplored solutions in optics engineering.

You will be working in a small team on state-of-the-art spectroscopic technologies, at the edge between physics, chemistry and mechanical engineering. You will also have an insight into the food & beverage and authentication industries.

The applicant requires a Master's degree (M.Eng, MSci) in Physics/Engineering or similar fields (Materials Science, etc.) and hands on laboratory experience. Applicants with a B.Sc/B.Eng degree and experience in the field will be considered and are encouraged to apply.

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About The Team

The core team consists of the CEO, the Business Development Manager and two researchers. We collaborate actively with the Department of Physics at the University of Oxford, having successfully completed a joint Innovate UK funded project and collaborating actively with a PI and PhD and Master's students from the department.

About You

We are looking for an applicant with hands on laboratory experience, with knowledge of spectroscopic characterization techniques such as Raman Spectroscopy, Fluorescence Spectroscopy, Absorption Spectroscopy & similar techniques. Basic knowledge of optics is also desired. Hands-on experience in optics alignment and basic knowledge of chemometrics and analysis algorithms are bonuses.

Please consider that you do not need to fulfil all the requirements listed to apply: if you are a tinkerer and you like this role, we encourage you to send your CV.

The Role

In this role, you will first get to know VeriVin's current laboratory setup and spectroscopic devices. You will then work with the engineering team to assemble and test new setups, collect and analyse data and give feedback on the instrument performance. Working with the team, you will have the opportunity to further improve upon our current setups, make them more economical and source parts for future functioning, viable end-user products ready for reproducible (mass-)production.

Location

The work will take place at VeriVin's premises in Long Hanborough, Oxfordshire.

Qualifications

Candidates should possess a M.Sc/M.Eng in engineering, chemistry, physics or a similar field. Candidates with a B.Sc/B.Eng and relevant experience are also encouraged to apply.

Experience

Experience in assembling systems for end-products is desired. Experience in an optics lab is preferred.

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Skills

Essential: Candidates should have hands-on lab experience in optics and/or in spectroscopic characterisation of liquids/materials.

Desirable: Experience in optics alignment, essential knowledge of Raman Spectroscopy, knowledge of geometrical optics.

Compensation

The salary for this position will be in between £22,000 and £28,000 p.a. depending on experience and qualification.

How to Apply

Interested applicants should send an email entitled "Application: Optical Systems Engineer" to info@verivin.com. You will need to supply a CV and a supporting statement explaining how you meet each of the selection criteria for the post using examples of your skills and experience, as well as provide details of two referees.

Equality of Opportunity

Entry into employment will be determined only by personal merit and in all cases, ability to perform the job will be the primary consideration. No applicant shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

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