

SBQuantum are using cutting edge science to enhance the way we use magnetic fields in order to 'Reveal the Invisible' for our clients. We are reinventing the way companies sense the world by innovating magnetics to provide solutions for problems to which this sensing modality was previously redundant. As a forerunner of Sherbrooke's nascent quantum hub, SBQ are prototyping a 'Magnetic Intelligence' platform, built around a novel diamond-based magnetometer. This platform will reveal hidden objects and enable improved navigation even in difficult environmental conditions. Magnetic fields are everywhere around us, let's make them central to how we sense the world.

### Your mandate – make the best diamond magnetometer

Do you have a proven track record of atomic defect magnetometry? We are looking for candidates who can use this background to optimize and implement new concepts for control and readout of a quantum magnetometer. In close collaboration with our engineering team, you will guide hardware improvements to increase the sensitivity of our sensor. Specifically, you will:

- Contribute to the calibration, sensitivity and accuracy characterization of the magnetometer;
- Explore different operating regimes of the magnetometer to find the optimal operating ranges;
- Implement nuclear spin polarization sequences and various pulse sequences;
- Interact with different partners to develop new quantum control schemes;
- Guide the application of different AI/ML tools to improve the prototype.

### What you need to join our team!

- SBQ are looking for candidates with a high degree of autonomy and rigor to develop a high-performance autonomous magnetic inspection solution that meets customer needs. We are not afraid to fail so long as we learn from it - it's part of the adventure. We are looking for: A strong ability to work in a cross-functional team. You will work in a multidisciplinary team of nine passionate people in Sherbrooke, QC so we are looking for examples of times you have excelled in a team environment be that at school or in an extra-curricular activity;
- Physics or engineering physics background including 2+ years research experience on NV centers;
- Agility to shape decisions to navigate ambiguity and adjust priorities;
- Responsiveness to criticism, ability to set clear and measurable goals;
- Our schedule is flexible and includes working remotely when tasks allow;
- Bilingualism in French/English is an asset - the majority of our documentation is in English;
- Full-time position in Sherbrooke - 1.5 hours from Montreal, 1 hour from Vermont, close to four ski resorts and plenty of mountain biking trails!

Do you want to take an active part in the deployment of quantum technology in the field taking our magnetometer performance to new heights? Contact us, our team wants to meet you!

Send your CV and cover letter to : [david@sbquantum.com](mailto:david@sbquantum.com)

David Roy-Guay, CEO and co-founder, SBQuantum

As featured in: [Wired](#) [The Economist](#) [A case study](#) [Graduation from the Creative Destruction Lab](#)  
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