

Better Futures+ Internships

Carbon Infinity

About the company

Carbon Infinity is a direct air capture (DAC) startup founded in late 2019 based in the UK and China with an R&D lab in Shanghai, China. We are developing a modular, solid-sorbent based technology to capture CO₂ directly from ambient air and support the decarbonisation of hard-to-abate sectors (aviation, shipping, chemicals), while also deploying our technology to sequester CO₂ and bring atmospheric concentrations of CO₂ down to safe levels.

About the role

This project has been initiated by senior leadership of Carbon Infinity and is inspired by the latest advances in artificial intelligence (AI) and machine learning (ML) – particularly the breakthroughs achieved by the [AlphaFold](#) project at DeepMind. Our material science research to-date has largely been laboratory and physical experiment based; however, we acknowledge the potential applications of AI and advanced ML techniques for computing-based materials discovery, modelling and testing. This project is designed to form the foundation of our future investments in AI-driven material science research. You will lead this project from inception and have full freedom over the tech stack you wish to employ, the opportunity to develop new and existing skills, and the authority to experiment and explore new technologies. You will work closely with David - the Founder and CEO of Carbon Infinity (and will likely teach him a few things along the way) on this project, who will ensure all resources and networks at the company's disposal are available to help you succeed. The primary ambition of the project is to scope existing datasets, build, test and iterate an ML model designed to develop and discover new carbon capture sorbent materials, and ideally leave a solid foundational infrastructure for a team to build on your work. Some literature which may offer a valuable primer for this project are linked [here](#), [here](#) and [here](#).

About the intern

The only 'must-have' trait we require of new team members is a desire to learn and push boundaries. We're in uncharted territory when it comes to the climate crisis and we not only welcome but need out of the box thinking. Some traits we think would help you succeed on this project include:

- **A passion for quantitative/data analysis.** You may have spent your spare time during the pandemic looking at covid models and thinking of ways to improve them, or you may be doing a degree in Engineering, Statistics, Data Science or Applied Mathematics and are wondering how you can best apply your skills to global problems (climate change is quite a big one). We'd love you to apply your skills in what we aim to be a foundational project for our company and technology going forward.
- **A desire to develop existing and new technical skills.** You may have played around with TensorFlow for a side project, built databases in SQL, or used Python or C++ in your research and want to apply these skills elsewhere. We're technologically agnostic when it comes to

what stack you want to build with and encourage you to explore new technologies as part of this project.

- **A self-starter, problem solving attitude and willingness to fail.** There will be days where something doesn't work and, it may sound counterintuitive, but we welcome this. Breakthrough technologies are not developed overnight and so we recognise failure will occur along the way. What is most important is that you bring an attitude looking to learn from failure, remember the 'wins', and build on them throughout the project.

Length of internship: 3 months would be ideal for you to properly get your teeth into this project, learn and hopefully develop new skills. We are flexible on this – it is a brand-new project you will be launching and so if your availability only extends to 1 or 2 months, we would still love to hear from you.

Remuneration: London Living Wage (£10.85 per hour)

To apply: please email h.flower@imperial.ac.uk and David via david@carboninfinity.com (or if you have any questions about the role please don't hesitate to reach out to David via email too)