

Software and technology are evolving at a fast pace and is essential for businesses in this digital age.

It is considered an area of intensive R&D with some sectors such as artificial intelligence and robotics being highly innovative, relying on R&D activity and tax relief to fuel further innovation and growth.

Qualifying R&D projects can also be found in writing, modifying, testing software or designing system that use hardware or software combined. From creating algorithms to developing software applications, projects may require both bespoke methodology and unique architecture to be developed to deliver technologies in new and improved forms.

As a result it is one of the largest beneficiaries of R&D Tax credits, and it worth checking if your development work qualifies.



EXAMPLES OF QUALIFYING R&D IN TECHNOLOGY:

- (v) Customising or creating new algorithms, coding or software architecture to solve complex problems.
- **Oreation of programming interfaces, tools,** SDK's or API's.
- (2) Creation of advanced technical features and functions.
- Creating a new software platform for managing workflow.
- Adapting and improving existing technologies to suit the particular needs of the business.
 - Merging legacy systems into new automations Integrating disparate technologies.
- Devising innovative methods of capturing, manipulating, protecting and transmitting data.
- O Developing software to handle, process or analyse large amounts of data (Big Data) in new or innovative ways.
- (v) Improving data encryption and security.
- Solution Blockchain & Firmware development.
- (v) Development that includes Artificial Intelligence (AI), Machine learning (ML), Internet of Things (IoT & IIoT), Robotics.
- Wireless, satellite and other types of telecommunications.
- (v) Developing new operating systems or languages.
- Extensions to database software, operating systems or programming languages.
- **O** Development of computer games.
- O Developing high performing modelling or simulation tools.



CASE STUDY 1

- Overview: Online performance analysis platform
- Obvelopment of a web-based platform to discover, consolidate and visualise data. This included internal, external and 3rd party data. Scalability by using cloud services and reliable access to external and 3rd party data was established. The use of API's and latency allowed the company to process and present real time data in order to monitor performance and compare to competitors.

CASE STUDY 2

- Overview: Fintech software development
- This company undertook several software development projects to create new systems for calculating claim values. By using intelligent algorithms the technology would 'learn' from customer trends and accurately predict the probability of customers defaulting on the debt. New, low-latency algorithms needed to be developed to support the workflows and it was uncertain how to create machine learning techniques within the algorithms.

CASE STUDY 3

- Overview: Developments made to a legacy software system
 - This company had developed and extended their (now legacy) software system. The monolithic architecture had become cumbersome and very difficult to maintain. The development involved the re-architecture of the underlying platform to make it into a modern, flexible, extensible and secure micro-service based architecture. It was uncertain how the team could split the specific legacy monolithic technology into smaller micro-service based components and how to achieve such an extensive architectural re-design, without adversely affecting the underlying stability of the platform



