



# Creating a virtual agent to support MedTech innovators

The Science and Technology Facilities Council (STFC) Hartree® Centre worked with Chilton Computing as part of an Innovate UK funded project to create a virtual agent that helps innovators navigate the medical device regulation space.

## Challenge

The COVID-19 pandemic has accelerated the development of a spectrum of new medical devices ranging from in vitro lateral flow tests to products powered by AI and Internet of Things (IoT) technologies. For innovators, the strict and evolving regulatory requirements governing medical product development are challenging to navigate. With new regulations coming into force from the EU and certifications introduced for UK products, there is a growing demand for expertise to help innovators transition into, understand and keep up with requirements to get their devices approved in time for market launch.

## Approach

The Hartree Centre's Research Software Engineering team used their expertise in AI and natural language processing to create a chatbot – the first for use in the regulatory space – to complement the Nav.AI tool developed by Chilton Computing. The chatbot is capable of covering a broad spectrum of queries and generic questions on the regulatory process as a whole, signposting users to help them get the most out of the Nav.AI tool. By adopting an AI-driven approach to gather, process and link data, they were also able to automate the process of identifying the relevant information and connecting it to help with specific regulatory assessment tasks.

## Benefits

This work not only benefits innovators who need support navigating and making sense of a crowded and potentially overwhelming regulatory space, but it also unlocks the power of conversational AI to capture contextual information from the questions that are asked of the chatbot. This information is used to help Chilton Computing to accelerate the development of their tool, building on previous iterations to help users get the most out of it and ensuring quality, timely support is available for medical innovators. This combination strengthens the overall market offering of the Nav.AI tool contributing overall competitiveness as the company look to expand into international markets.



This has enabled us to explore the potential of conversational AI, opening up new ways to capture and act upon contextual information to provide a better and more powerful user experience, accelerating the development of our tool. ”

Erica Yang  
Chilton Computing





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Our collaboration with the Hartree Centre has offered us great flexibility to learn, test and experiment with new technologies without needing significant investment upfront, helping us to overcome an obstacle that is faced by a SME at the early stage of product R&D. ”

Erica Yang  
Chilton Computing

## At a glance

- Signposting innovators to complex regulatory resources for medical devices
- Using data science, AI and Natural Language Processing to collect, process and link data
- Chatbot capable of answering broad user queries on medical device regulatory guidance and terminologies
- Provides contextual information to support the iterative development of Chilton Computing’s Nav.AI product

## Who we are

- 70+ computational scientists and technologists
- World-leading supercomputing and AI infrastructure
- Bespoke small teams built around your project
- Tailored business development support
- Access to our network of industry, academic and technology partners

## What we do

- Boost productivity and enhance innovation for industry
- Big data analytics and artificial intelligence (AI)
- High performance computing and quantum simulation
- Training and skills development
- Insights into future technologies



Credit: STFC/Hartree Centre

## Our impact on UK industry and society

The Hartree Centre was created by UK Government to help businesses and public sector organisations accelerate the adoption of high performance computing (HPC), big data analytics and artificial intelligence (AI) technologies. We play a key role in realising UK Government’s Industrial Strategy by stimulating applied digital research and innovation, creating value for the organisations we work with and generating economic and societal impact for the UK.

The Science and Technology Facilities Council (STFC) Hartree Centre is part of UK Research and Innovation.