

CPCS Develops AR Application that Shows Descriptions of Illnesses for Surgeons



🎯 Objective

Design and develop 3D images of human internal organs (lungs, kidney, spleen, etc.) and a DNA model, print them out via a 3D printer, and develop an application capable to focus on the organs and DNA models to augment their reality by showing possible genetic illnesses as well as hints for relevant treatments and lifestyles.

⚠️ Challenge

A professional coalition of surgeons from London, who aimed to deliver a superb presentation at one of the Medical industry events, approached CPCS with a request to develop 3D images of a human DNA model and internal organs from scratch and to apply Augmented Reality techniques for the educational and marketing purposes.

One of the challenges for our AR engineers was to resolve a problem related to the AR application's ability to recognize the developed 3D models of internal organs from different perspectives.

/// Solution

While developing the application for 3D models of human internal organs and thematic illnesses for a Medical industry event, our engineers started with creating a library of 3D objects. Initially, we had two approaches for recognizing the objects created by our AR application: with and without QR codes. Our investigation showed that for the purpose of our Client, the most efficient way would be to teach the app recognize the objects without QR codes.

We were also teaching the application to recognize our 3D models from varied angles. Our finding here was to apply points on 3D models that contrasted a great deal with the models. The approach allowed us to form varied 'point' angles of our 3D objects for the application to augment their reality from different perspectives. Another cool feature of the AR application is the system's capability to widen the choice of 3D models and continue to work with the new ones.

Technology Choice

- Backend – Symphony
- Design – Unity 3D, Maya 3D
- Swift for iOS
- Unity for 3D models creation, animation
- AR libraries for Unity

Team and Duration

- 1 engineer for the iOS development
- 1 engineer for 3D models design
- 1 developer of the library recognition
- 0.5 business analyst
- 0.5 project manager
- 1 QA engineer
- 3 months

✓ Results

A group of British surgeons reached their aims: they promoted their professional alliance via one of the industry events and warmed up the public interest to their mission via the AR application. CPCS's engineers have also incorporated a potential possibility into the AR product to build upon it and reuse the code for varied purposes, namely for launching another AR application with no sufficient investments.

/ Industry

Medical industry events, pharmaceutical companies and relevant campaigns, medical universities, marketing agencies for promoting companies from other industries, etc.

/ Application

Educate an audience on the subject matter and perform a warming-interest mission for potential partners or clients via 3D modelling and Augmented Reality techniques.

/ Quick Fact

Augmented Reality has been conquering cutting-edge marketing trends for product and services distribution purposes.

/ About CPCS

From artificial neural networks to custom electronics design, highload and big data projects. CPCS is a team of 100+ senior-level dedicated engineers open to go through an in-depth feature-by-feature product discovery process with you. We believe you would also benefit from our client-first approach, transparency of all our magic, as well as fair and flexible rates.



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