

Gazi University Faculty of Medicine Carried the Anatomy Lessons to Virtual Reality (VR) with RoT STUDIO.

# **At-a-glance**

#### Industry: Education

**Customer:** Gazi University Faculty of Medicine Department of Anatomy

**Customer's Challenge:** To train more competent physicians in a lecture hall, who know anatomy well and have learned new techniques, by making 3D medical models which look more interactive and more realistic.

#### Solution: RoT STUDIO – Designer Module

**Results:** Through the designer Module of RoT STUDIO, the first local Virtual Reality content development platform was initiated and:

- Interactive three-dimensional Virtual Reality scenes and training scenarios were designed.
- Three-dimensional models were visualized and made interactive in Virtual Reality environments.
- Turkey's first local three-dimensional "anatomical lesson module" was produced.

### **Overview**

"The more you give visual and auditory stimuli in learning, the more reinforcement is obtained in learning. In particular, new technologies need to be used when teaching anatomy lessons."

- Prof. Tuncay Peker Gazi University Department of Anatomy

Today, Virtual Reality (VR) technology has begun to transform medical education, providing students with more realistic and interactive lecture environments. According to research announced by Market Data Forecast in January 2022, the global education market, mostly driven by Virtual Reality (VR) technology, is estimated to be worth \$320 billion in 2021 and is expected to reach \$414 billion by 2026.

Gazi University is one of the leading institutions of virtual reality-based medical education. The first anatomy lesson in Turkey that includes an interactive virtual reality application was given by Prof. Tuncay Peker in 2019 at Gazi University Anatomy Department on RoT STUDIO platform.





# **Academic Needs**

- To be able to understand the internal structures of human organs and observe their distances from each other in three dimensions.
- Eliminating the difficulties encountered in obtaining satisfactory 2D images obtained from present computer programs and render engines.
- To be able to design more realistic looking and interactive 3D medical models
- To offer interactive virtual reality applications in a lecture hall environment by reducing the need for physical prototypes.
- Contributing to the training of new physicians who know anatomy well and who have learned the new techniques.

# Easy-to-Use Solutions with RoT Designer

"With our RoT Virtual Reality solutions, our customers can create virtual reality scenes and interactive training scenarios with the drag & drop method, using their own 3D CAD and visualization models, without the need for coding knowledge.

We are very happy that, under the leadership of Prof. Tuncay Peker, the future physicians have the opportunity to teach anatomy lessons interactively with the RoT virtual reality application in the lectures of Gazi University Faculty of Medicine, Department of Anatomy."

- Selda Bahadır RoT STUDIO Managing Partner

## **Results**

- High image quality in modeling Carrying the original medical models he produced into RoT with the support of Gazi University Rectorate, Prof. Tuncay Peker obtained brilliant and excellent quality images.
- Interactive, easy-to-understand lessons in the classroom environment - Prof. Tuncay Peker stated that 2D books and atlases are used in medical education, and virtual reality applications are only made in laboratory environments, "We've brought virtual reality applications to the lecture hall with RoT STUDIO solutions. In this way, interactive education makes it easier for students to grasp the lessons."
- More efficient education It was observed that students who received training with the "Brain Lecture Module" retained much more information in their memory than those who received classical type of education.

"Above all, we are offering an alternative method that is as entertaining and enjoyable as it is instructive, for the younger generations who love to use technology. RoT STUDIO Virtual Reality solutions have a great role in the success of our journey in the third dimension."

- Prof. Tuncay Peker Gazi University Department of Anatomy





#### RoT STUDIO Realization of Things

It is Turkey's first local virtual reality content and education development platform and has been working for more than 20 years for its customers to create their own virtual reality content in an easy, fast, accurate and collaborative way.

#### rotstudio.com

**Rot STUDIO Product Family consists of 3 modules:** RoT Designer, RoT Trainer ve RoT Ergonomics

### Advantages of RoT STUDIO

- Ability of development teams in different locations to work simultaneously on the same data in the same virtual scene
- Visualization of shared data and interactive collaboration
- Ability to take measurements and sections within the scene
- Avatar representation of the participants
- Voice chat in the scene
- Acceleration of decision-making processes
- Reducing the need for physical prototypes