## **ABSTRACT**

During the pandemic, many people are looking for ways to keep exercising at home or in their surroundings. One of them is by using a sports application that will help people to exercise easily and comfortably at home. Reporting from the data provided by Adjust in March 2020, many users use applications, especially sports applications, one of which is fitness sports. Therefore, the ARFI application was created, which stands for Augmented Reality Fitness. This application is an android application that utilizes Augmented Reality technology. This application was made with the aim of helping people who want to do fitness to be helped by the fitness program exercises that have been provided in the application using Augmented Reality (AR) technology. Thus, the ARFI application has succeeded in achieving its goals. This was proven in user testing involving 21 respondents, where 81.61% of users strongly agreed that the ARFI application was very effective in helping users when they wanted to exercise assisted by a virtual sports coach, thus helping users when they were still confused whether the movements were being done correctly or not. With the features provided by the ARFI application, it gives an overview to users when doing sports virtually using AR.

Keywords: Augmented Reality, sports, application, body tracking