



Programming Challenge
1st Edition

ITCL Technology Centre

Programming Challenge 2021

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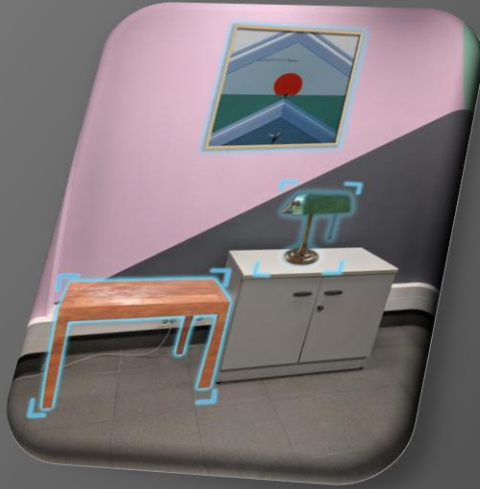
1. ITCL Technology Centre

1. ITCL Technology Centre: About us

- Founded in Burgos in 1989, with a multi-sector approach and an international scope, we pay special attention to our closest business environment.
- We offer advanced technological services and cooperate with multiple companies in the design and execution of applied research processes, technological development and innovation projects.
- Our goal to boost and make easier the use of technology as a competitive tool for the business environment, positioning ourselves as a reference centre in technologies applied to production and intelligent solutions. Our research groups develop and work on several tools in the fields of electronic design, artificial intelligence, telemedicine, virtual reality and simulation, energy efficiency and monitoring and control systems.

1. ITCL Technology Centre: Our products

- As a technology centre, ITCL develops R&D&I projects with several companies and provides innovation support services:
- Fundamental or industrial research, development and technology innovation projects on our own or in cooperation with companies, universities, public research centres or other entities.
- R&D projects directly contracted by companies or other private entities.
- Technology consulting, including technological diagnoses and technical feasibility studies.
- Specialized technical training.

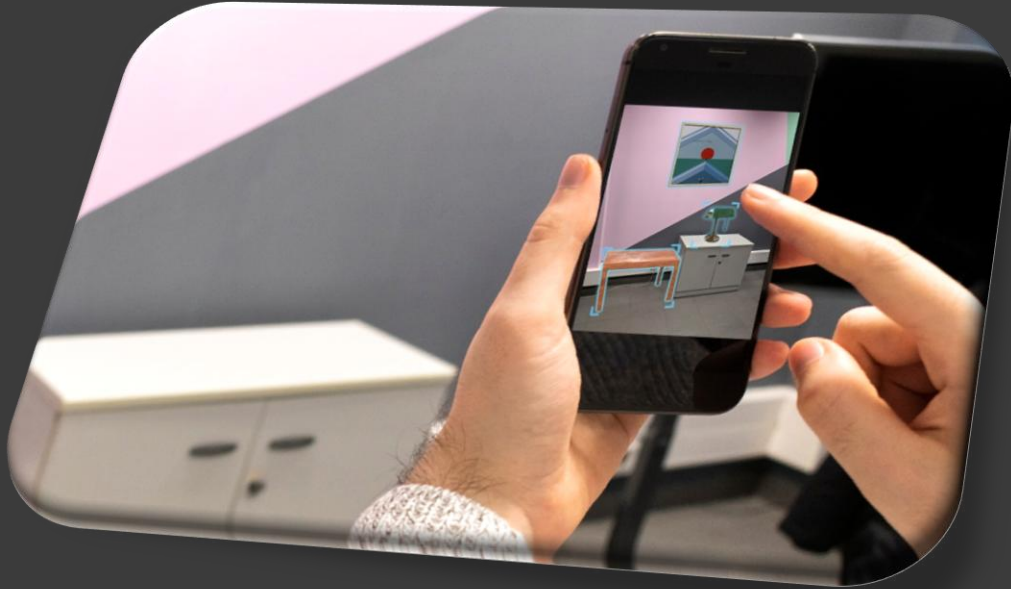


2. About the Programming Challenge 2021

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We are looking for innovative interactions in the field of Augmented Reality, therefore we propose the development of 2 applications with the use of this technology, which will consist on:

2. About the Programming Challenge 2021

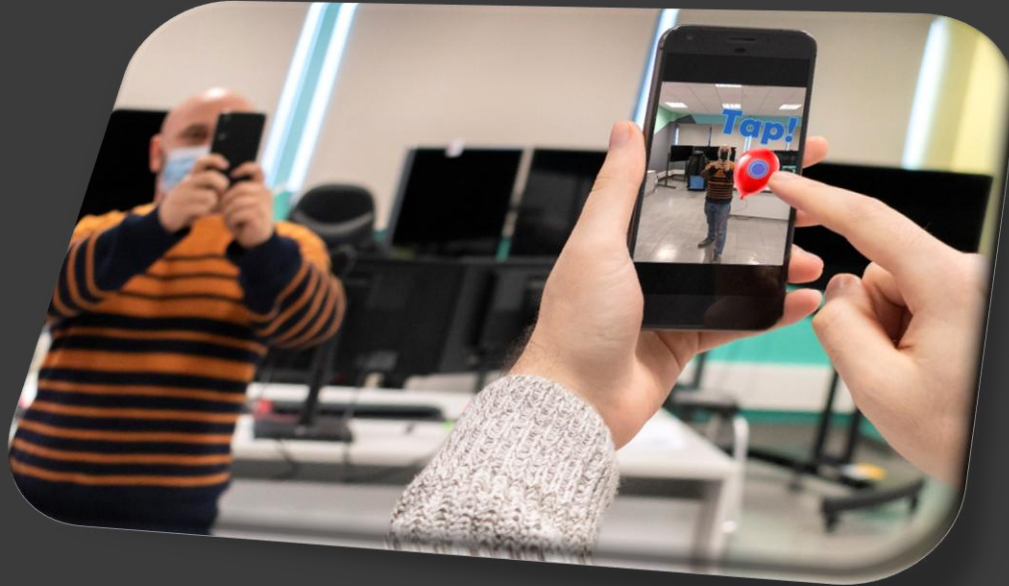


1st- Place furniture in AR

Create an application that allows us to see how objects that we have not yet bought would look like in our spaces.

Requirements: being able to place a table in the centre of a room and hang some shelves on a wall. The users should be able to reposition, rotate and resize furniture. The application must be able to distinguish between surface types such as floors, walls or tables, and consequently allow to place only certain types of furniture pieces on each surface type

2. About the Programming Challenge 2021



2nd- Ballooning in AR

Create a simple game in which two players have to alternately hit a balloon on their mobile screen to prevent it from touching the ground. Requirements: two different users must see the same objects in augmented reality. Both players will see the balloon float in the same position in AR and will have to pass it to each other

2. About the Programming Challenge 2021

Recommendations

- We recommend using Unity and its AR Foundation framework for the two challenges, which allow rapid development of augmented reality applications regardless of the hardware used. Likewise, for multi-user interaction we recommend using a multiplayer library like Photon.
- Any asset or library that is deemed appropriate can be used.

3. Terms & Conditions

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Awards

- The effort and creativity deserve a prize
- We will reward the best classified with a reward of 2.000 €
- The participants will enter our database. They may be hired by ITCL to develop a project based on this technology for real world companies.

3. Terms & Conditions

Deadline for entries

4 april 2021

Candidate selection process

Once the proposals have been received, the jury will proceed with their evaluation. The evaluation of the proposals will be weighted, with the following rating:

1st challenge: 35 points

3rd challenge: 65 points

To obtain the maximum score, solutions to the two challenges must be presented.

3. Terms & Conditions

Challenge resolution

April, 22

The jury will communicate its resolution on this date, announcing the name of the winner through the ITCL website, social network profiles, and directly to the candidates

3. Terms & Conditions

Participants

The competition is open to physical persons (students, workers, etc.). Proposals should be submitted individually.

ITCL employees, subcontracted personnel, partners or individuals engaged in activities with ITCL are not eligible to participate.

Presentation of applications

To enter the challenge you must register [here](#)

Send us the link to the open source repository where you have your source code.

More information: info@itcl.es

3. Terms & Conditions

Industrial and intellectual property rights

The application will be developed as open source, preferably under the MIT license or similar.

Participants acknowledge and agree to not being authorized to send the submitted proposals to other contests in any case.

Contest participants acknowledge that the submitted proposals are original, neither issued nor shared with any third party before the date of registration of the proposal, and that they are their authors and the rightful owners of any rights derived from them, stating that they are not infringing any third party rights, such as intellectual or industrial property rights, among others.

3. Terms & Conditions

Personal Data Protection (1/3):

The Contest Participant, on the occasion of his participation in the competition organized by INSTITUTO TECNOLÓGICO DE CASTILLA Y LEÓN, (ITCL) for Programming Challenge 2021, as indicated in the competition rules (Terms & Conditions) and in the present document, authorises ITCL to process their personal data.

ITCL is committed to protect your privacy, and guarantees compliance with personal data protection legislation and, specifically, that your personal information will be processed: in a lawful, fair and transparent manner; subject to specific explicit and legitimate purposes; only if it is adequate, relevant and limited to what is necessary in relation to the processing activity; accurate and updated; in such a way that the identification of the interested party shall be limited to what is necessary for the purpose.

In accordance with the provisions of current regulations on the protection of personal data, specifically in the General Data Protection Regulation (GDPR), we inform you about the processing of your personal data as a participant of the contest organized by ITCL on the occasion of the Programming Challenge 2021.

You must read the following notice in order to know the purpose of the processing of your personal data and other privacy considerations.

Data Controller:

Instituto Tecnológico de Castilla y León (“ITCL”). C/Lopez Bravo, 70, 09001 Burgos, (Spain). Privacy contact address: info@itcl.es

3. Terms & Conditions

Personal Data Protection (2/3):

Purpose:

- Management of the participant's subscription, application and participation in the contest/competition.
- Compliance with legal, tax, etc. obligations in relation to the winners.
- Control of access to ITCL facilities of the winners, if prizes are given at ITCL facilities.
- Publication of photos, images or video of the winners on the occasion of prize-giving ceremony on the ITCL website and social network profiles. The transfer of the use of this images and videos is free and undertakes not to claim any compensation, except for the delivery of the prize obtained as a result of winning the contest.

Legal ground:

- Consent given by you in order to facilitate your participation in the competition.
- Legal obligation: comply with the legal obligations stipulated by tax and other local legislation.
- Legitimate interest of ITCL: internal control and safeguard the security of the facilities.

Recipients:

- Service providers (Technology services and systems maintenance companies) that need access to the data in view of the services they provide to the ITCL, in certain specific cases.
- Third parties (Spanish Agency for Data Protection, Public Administration, etc.) when necessary in compliance with legal obligations.

3. Terms & Conditions

Personal Data Protection (3/3):

Rights: Right of access to your personal data to know which data are being processed and the processing operations that are being performed; right to rectification of any inaccurate data; right to data portability; right to erasure of the personal data, if you withdraw your consent to the processing; right to request the restriction of the processing of your personal data where the accuracy, legality or need to process the data is doubtful and in the other cases envisaged in the GDPR. In order to exercise these rights please write to Instituto Tecnológico de Castilla y León (ITCL). C/Lopez Bravo, 70, 09001 Burgos, (Spain) or via email at info@itcl.es. In both applications you must include your full name, and indicate which rights you wish to exercise; and also attach a photocopy of your ID or other similar identification document.

Security of the information: We have implemented the necessary technical measures in order to protect your data and information from accidental losses, unauthorized access, use and disclosure. However, despite the diligent implementation of such measures, the user should know that the security measures are not impregnable.

Conservation of your data: The personal data provided by the participants will be kept until the end of the contest. Once the contest is concluded, the personal data provided will be duly blocked for the time required by applicable legislation, 3 years. The personal data provided by the winner will be kept during the term of transfer of the rights of use of the images or video related to the contest, which in this case is 2 years.

By signing this document, you confirm that you have read this personal data processing policy and consent to the processing of your data to participate in the present contest organized by ITCL.



Thank you for your participation