Outreach STEM Community Outreach Project supported by tPOT research group

The following is a summary of a STEM outreach project that will take place in June. Students joining the project team will be required to project manage the delivery of the event and activities will include the technical development of the project and promotion and marketing to the target audiences.

The project will be lead by Dr. Damon Berry and Fatima Badmos.

There will be 4 places available to students on this project. It will be an unpaid internship finishing after the event takes place on the weekend of 22nd June. Students will be required to be present during the events and they will be based on campus for the duration of the project.

If students obtain an alternative workplacement opportunity during the project they will be free to take up that opportunity and leave the internal project.

Project Description:

There will be a 3-day campus opening event on 1-3rd of June with the 3rd of June intended as a family day. Also, TU Dublin will sponsor the Stoneybatter festival at the weekend around 22nd of June. For both events, members of the tPOT (towards People Oriented Technology) research group intend to develop a number of interactive outdoor activities in the campus to engage people during the events.

The challenge for this internship project will be to contribute directly to the development of a technology-enabled treasure hunt. You have probably played a "no-tech" version of this type of game yourself using pieces of paper with clues to the location of the next clue hidden under rocks or flowerpots.

The interns will contribute to developing a selection of the following elements.

1. a player registration page that is accessed via a QR code.

2. "each clue to the encoded using a simple substitution cipher which will be called the "alien code". (Players will be given a cypher key to this code to enable them to decode each clue before finding the next one)

3. create the STL files needed to produce 3d printed plaques with the coded message printed directly on.

4. develop web resources on a site on the vparks.ie domain.

5. use QR codes on a plaque that links to a web page containing a coded message.

6. Use NFC tags linked to a webpage that contains a coded message.

7. Solve a challenge on a webpage.

8. use fixed-in-place QR code device that can read a QR code carried by each player - to allow the system to be personalised through a personalised audio message.