Xilinx Innovation Challenge (GO PYNQ)

Moto:

To build an application which provides solution for a real life problem using Python in conjunction with the Xilinx PYNQ platform and share back to the PYNQ Community.

Task:

1. Participants should come up with an idea to solve a real life problem.
2. Prepare an abstract which includes :

   a. Demographics: Team, College etc.

   b. A single page to describe: Problem statement, solution proposed using PYNQ

   c. Supporting block diagrams (if needed) – limited to 2 diagrams

3. Abstract entries will be evaluated at Xilinx and 10 teams will be shortlisted. The shortlisted Institute will be receiving PYNQ-Z2 platform board (based on a request from an Institute/Prof/Dept) – in order to take the ideas onto hardware.

4. Shortlisted teams would be required to bring their idea to life. Working source code with results to be pushed to Github 1 week before the Kshitij'2019.

5. The submitted apps will be evaluated based on the judging criteria and winners will be announced on the finale event of Kshitij'2019

App options while using PYNQ:

Depends on your creativity, e.g. IoT, Video Processing, Any compute heavy workload being accelerated

Judging Criteria:

	Score	Criteria	Description
Idea	10	Creativity	How creative or innovative is the idea behind the design?
	10	Viability	How relevant is the design's use case to real problem?
Open Source and Reproducible	10	Open-source	Are build steps provided, Python packaged, and available on Github as notebook or source file.
	10	Reproducible	Could someone reproduce this work starting from the pynq v2.0 image and going through their notebook
Implementation	10	Feasibility	Does it actually work?
	10	Uniqueness	How well does the app leverage a variety of different open-source APIs and programmable logic?

Note:

- Abstract evaluation will be judged on 'Idea' category only.
- The shortlisted abstracts will be judged on remaining categories

Skills needed:

- Creative Problem Identification.
- Python (working knowledge).
- Domain Knowledge (of the problem space identified).
- Hardware Knowledge (to be able to understand hardware resources available on PYNQ).

RULES

1. Every team has to register online on the official Kshitij website for the competition.
2. A Team ID will be allocated to the team on registration which shall be used for future references.
3. A team can register at any point of time before and can submit final abstract(as mentioned in the structure).
4. The decision of the organizers or judges shall be treated as final and binding on all.
5. No responsibility will be held by Kshitij, IIT Kharagpur for any late, lost or misdirected entries.
6. The design presented by the teams should be original (not protected by means of patent/copyright/technical publication by anyone).
7. The organizer's reserve the rights to change any or all of the above rules as they deem fit. Change in rules, if any will be highlighted on the website and notified to the registered teams.

TEAM SPECIFICATION & ELIGIBILITY

- All students with a valid identity card of their respective educational institutions are eligible to participate in the competition
- One team can have a maximum of 4 members.
- Students from different institutes can be a part of the same team.

Prizes:

1.Top three best apps will be awarded:

- First prize of Rs 45,000/-
- Second prize of Rs 30,000/-
- Third prize of Rs 15,000/-

2. Consolation cash prize for every shortlisted idea which is then showed to be working on hardware too.
3. Icing on the cake is that the 10 shortlisted teams get to keep the PYNQ-Z2 board!

For Reference:

- PYNQ being open sourced project of Xilinx, much of the information is available online: http://www.pynq.io/
- PYNQ Overview material will anyways be provided, which will help getting familiar with the online resources
- Example community projects to get you inspired: http://www.pynq.io/community.html
- One pre-determined slot – one hour per week, given by Xilinx Employee for support/brainstorming
- Platform to ask questions:-https://github.com/Xilinx/GO-PYNQ/issues
- Github page of Xilinx for Kshitij 2019 :- https://github.com/Xilinx/GO-PYNQ