



GUJARAT TECHNOLOGICAL UNIVERSITY
Community Innovation & Co-Creation Centre

Report

on

**National Instrument - Hack A Thon
&
MyRIO Open Challenge**

organized on

25th - 26th July 2015 (NI-Hack A Thon)

&

30th July 2015 (MyRIO Open Challenge)

at



Community Innovation & Co-Creation Centre

Room No: 128, Gujarat Technological University, Ahmedabad Campus,
ACPC Building, LDCE Campus, Navrangpura, Ahmedabad



Report

National Instrument - Hack A Thon

Gujarat Technological University conducted “Two days’ Hack a thon on National Instrument MyRio for faculties & students”. NI MyRio is an open source, parallel programmable, hybrid automation embedded controller that introduces students to industry proven technology and allows them to design real, complex engineering systems more quickly and affordably than ever before.

Mr. Vasantha Kumar V, resource Person from NI Solutions conducted the session. **CiC3 team including Prof. Krutika Paradkar, Prof. Rutika Ghariya, Prof. Raj Hakani, Prof. Tosha Shukla, Prof. Hemal Nayak and Prof. Mitesh Solanki** were present and guided students about MyRio and taught how to utilize all available functions of hardware.

After completion of Hack A Thon on " National Instrument MyRio " at 25th and 26th July 2015, GTU,CiC3 organized "MyRIO Open Challenge" on 30th July 2015 at Room No: 128, Gujarat Technological University, Ahmedabad Campus, ACPC Building, LDCE Campus, Navrangpura, Ahmedabad. This Challenge was a platform for all students to showcase their talent and compete with brilliant minds from industry and academic. GTU had provided all necessary hardware including MyRio kit and modules to each team. **Prof. Rutika Ghariya** was present and helped students to solve their technical quarries in their projects.

Contents of Hack A thon on 1st Day were **Understanding Graphical System Design**: Approaching engineering solution from a System Design point of view, **Introduction to LabVIEW & Hands – on with LabVIEW**: Understanding the graphical programming, connecting signals, using express functions and acquiring data.

Contents of Hack a thon on 2nd Day were **Understanding RIO: the present and future of Industrial automation**: Understanding the architecture of hybrid, open



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source, parallel multi-core processor that industry is moving towards (RIO). Hands-on for developing projects, developing mini-project on RIO. Understanding how RIO can be useful for multitude of teaching and project applications: Wireless sensor networks, Mechatronics and Robotics, Image and signal Processing, Bio Medical, **IoT**, Smart Grid and **Smart cities**, Smart Energy, Smart structures, Power electronics - system and controls, Parallel processing, FPGA, Microprocessor and DSP learning, Structural analysis, hardware in loop, Renewable energy, grid control, smart metering.





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MyRIO Open Challenge

Challenge Topic:

EARTHQUAKE EARLY WARNING SYSTEM

MAIN IDEA BEHIND THE PROJECT :

- Before 60 to 100 second, we get alert about Earthquake using this projected device.
- This device is prepared using Micro Controller and Sensors.
- This device is to be used at Multiple location.
- Transmitter device can be kept at Tectonic Plates and at Epicenter in multiple Quantity.

From this device we can alert the possible affecting area before Earthquake take place according to its rector scale.

Team Member :

(1) Maharshi Oza , (2) Neel Popat, (3) Yash Shah





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Feedbacks:

“I was lucky to participate in such events and to learn something so that in future we are also able to manage such things.”

Sohamkumar A Shah

“The workshop on NI Hack a thon was very interesting for me. I really like the hands on with LabVIEW myRIO. I enjoyed the session & I learnt some basic things about NI myRIO after this session. I am thankful to CiC3 for this workshop.”

Parth N Chavda

“It was awesome. Really it was more than my expectations and will really be helpful to me. It not only gave me technical knowledge but apart from that also the communication skills”

Shrey Fadia

“Very good workshop, basics were cleared very nicely”

DarshanPatel