

Online Faculty Development Program
On
Software Robotic Process Automation (RPA)

Under the banner of
Electronics and ICT academy
at National Institute of Technology Patna

20th September to 1st October, 2021

(10 days)



Chief Patron

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Director, NIT Patna

Patron

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Organized by

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www.nitp.ac.in/ict/

Supported by

Ministry of Electronics and Information Technology,
MeitY, Govt. of India.

About NIT Patna

National Institute of Technology Patna is the 18th National Institute of Technology created by the Ministry of H.R.D. Government of India after rechristening the erstwhile Bihar College of Engineering Patna on 28.01.2004. NIT Patna marked its humble beginning in 1886 with the establishment of pleader's survey training school which was subsequently promoted to Bihar College of Engineering Patna in 1924. This made this institute the 6th oldest Engineering Institute of India. The Institute is situated on the south bank of holy river Ganges behind Gandhi Ghat (where the ash of father of the Nation, Mahatma Gandhi was offered in the river Ganges). The campus has a picturesque river view with historic buildings presenting a spectacle of architectural delight and natural beauty. The Institute imparts high level education training, research and development in science, engineering technology and humanities along with high quality education and values at UG, PG and Ph.D. level. At present the Institute offers courses in six major technical disciplines viz. Architecture, Civil Engineering, Computer Science & Engg., Electrical Engg., and Electronics & Communication Engg. And Mechanical Engg. It also consists of well-established departments of Physics, Chemistry, Mathematics and Humanities and Social Sciences.

Electronics and ICT Academy

The Ministry of Electronics and Information Technology, Government of India has instituted seven Electronics and Information & Communications Technology (ICT) Academies of which, the academy of NIT Patna is one. The Academy at NIT Patna aims to design and organize basic as well as specialized training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to equip the teaching community with better knowledge and understanding.

Program Objective

The primary objective of this program is that, you will learn about the evolution and future of Robotic Process Automation and how Robotic Process Automation works and its components.

Program Outcomes

By the end of the program, the participants will be able to:

- Understand the rapid emergence of Robotic Process Automation (RPA) and its potential scope in future.
- Understand the core concepts of RPA and how RPA functions
- Identify its distinguishing characteristics from Automation.
- Gain vital insights into the RPA development methodology and identify areas of practical applications
- Look at the bigger picture overview of various RPA tools and their selection criteria
- Comprehend the necessity of RPA
- Identify differences between types of bots in RPA
- Familiarise with different types of tools used in RPA

Topics to be covered

Module 1: Introduction to Robotic Process Automation

- Importance of Robotic Process Automation (RPA)
- Why UiPath
- Defining Robotic Process Automation & its benefits
- Bots Types
- RPA Application in business
- How Robotic Process Automation works
- RPA development techniques and key take away
- Other Robotic Process Automation Tools
- UiPath tools overview (Hands-On)

Module 2: Description of UiPath

- Getting Started with UiPath
- Installation of UiPath's Community Edition
- Project and Project Types
- UiPath Tool Dashboard and its components
- Files, variables, data type in UiPath
- Flowcharts and Sequence
- State Machine
- Types of Templates
- User Interface
- Domains in Activities

- Workflow in UiPath
- Installation of UiPath Studio (Hands-On)
- Create a table to read and write data and display them using a message box (Hands-On)
- Create a workflow to run sequences with few examples of excel automation (Hands-On)

Module 3: Process Components, Recording & Scraping

- UI Automation Activities
- System Activities
- Variables & Arguments
- Imports Panel
- User Events
- App Integration
- Scraping
- Selector
- Create a process in UiPath using UI
- Automation Activities (Hands-On)
- Automating Excel data manipulation (Hands-On)
- Variables and Arguments (Hands-On)
- Automation of Mails (Hands-On)
- Automation using System Trigger (Hands-On)
- Data scraping using Screen and Web (Hands-On)
- Automation processes using Selectors (Hands-On)

Module 4: Data Manipulation, Workflow and Automation

- User events
- Workflow
- Excel Data Manipulation
- Text and Image Automation
- PDF Automation
- Citrix uses in automation
- Automating Text and Image (Hands-On)
- PDF text and image data Extraction (Hands-On)

Module 5: Programming, Debugging and Logging and Other RPA Tools

- Debugging
- Error Handling exceptions
- Logging
- Programming
- Extensions
- Project Organization
- Other RPA tools (Blue Prism, Automation Anywhere).
- Programming Activities (Hands-On)
- Log files read and write (Hands-On)
- Debugging errors (Hands-On)
- Error Handling (Hands-On)

Module 6: -Orchestrator

- Overview Orchestrator activities
- UiPath Orchestrator
- Orchestrator Account creation

- Orchestrator CE
- Create and run Robots
- Publish package
- Projects with various components of Orchestrator (Hands-On)
- Google forms data entry automation using excel (Hands-On)

Module 7: -RE Framework Overview

- Overview to RE-Framework
- State Machine Layout
- Framework layouts and its components
- Create a RE-Framework project based on automation of emails (Hands-On)

Module 8: -Citrix Automation and OCR workflow Activities

- Citrix Automation
- PDF Automation for text and image extraction using OCR
- Create a project for PDF Automation Using OCR (Hands-On)
- Create a project for Citrix automation (Hands-On)

Two-week FDP includes

40 Hours Instructor-led live online Pedagogy and Hands on sessions.

Who Can Participate?

Faculty members of UGC/AICTE recognized Universities and Engineering colleges all over India, PhD Research scholars, Students, Industry personals and other. However, priority will be given to the faculty members.

Registration Fee

- Faculty/PhD Research Scholar/Students: Rs. 500/
- Industry/others: Rs. 1000/-
- Foreign Participants- 50 Euro

Venue: Online mode

Proposed List of Resource Persons

Experts from the IIT, NIT and EarlyRise (A Unit of Xdigics Technologies Private Limited) for Expert lecture, Pedagogy and Hand on sessions.

Registration Process

1. Registration fee should be paid through online mode, the account details for this purpose is

Bank Name: Indian Bank/Allahabad Bank

Account Name: NIT Patna

Account No.: 50380476798

IFSC Code: IDIB000B810

2. Registration link (Use the below link to register):

<https://forms.gle/KRBJGPbxadkHDZ3G8>

3. The brochure of the program may be downloaded from the Institute website www.nitp.ac.in.

Deadline for registration: 18.09.2021, 5:00 PM

Selection will be done on first-cum-first-serve basis.

For any queries contact:

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