

SCHOOL OF PROGRAMMING AND DEVELOPMENT

RPA Developer with UiPath



Overview

This Nanodegree is Built in Partnership With



This goal of this Nanodegree program is to help you learn professional-level skills focused on developing and deploying software robots.

A graduate of this program will be able to:

- Code an automation using variables, arguments, sequences and flowcharts.
- Understand and correctly use the properties of User Interface activities to make them robust, reusable, and scalable
- See how robots use selectors within UI applications in order to identify where to enter or extract data.
- Scrape data and extract data and store those values in an Excel spreadsheet.
- Implement debugging techniques to ensure your code is free from errors.
- Understand Orchestrator Queues and Assets
- Design and build the automated solution in UiPath Studio.

This program is comprised of 3 courses and 4 projects. Each project you build will be an opportunity to demonstrate what you've learned in the lessons. Your completed projects will become part of a career portfolio that will demonstrate your acquired skills in RPA Development.

Program Information



ESTIMATED TIME TO COMPLETE

4 months; study 10 hrs/week



LEVEL

Foundational



PREREQUISITES

- Use Microsoft applications, understand data manipulation, and understand basic logical sequence flows (like Visio)
- Proficiency in a programming language and scripting in a programming language to review, implement, and modify code: VB.NET/VBA/C# experience is a plus.
- An understanding of the .NET framework.



HARDWARE/SOFTWARE REQUIRED

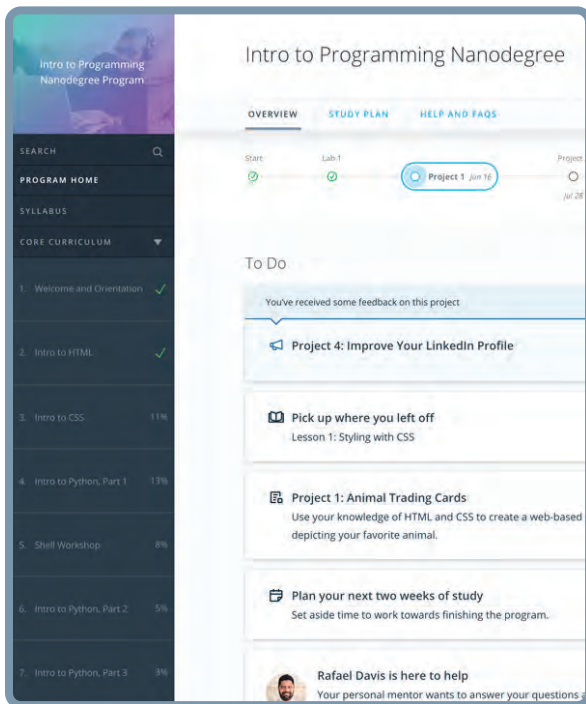
- CPU: 2x1.8GHz 32-bit (x86)
- 4 GB of RAM
- Windows 7+, Chrome, and Microsoft Office



LEARN MORE ABOUT THIS NANODEGREE

Contact us at enterpriseND@udacity.com.

Our Classroom Experience



REAL-WORLD PROJECTS

Learners build new skills through industry-relevant projects and receive personalized feedback from our network of 900+ project reviewers. Our simple user interface makes it easy to submit projects as often as needed and receive unlimited feedback.

KNOWLEDGE

Answers to most questions can be found with Knowledge, our proprietary wiki. Learners can search questions asked by others and discover in real-time how to solve challenges.

LEARNER HUB

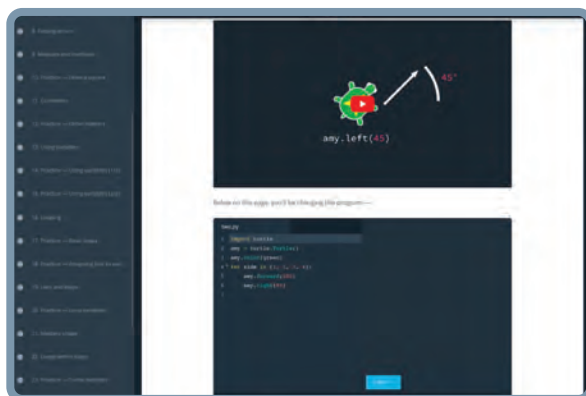
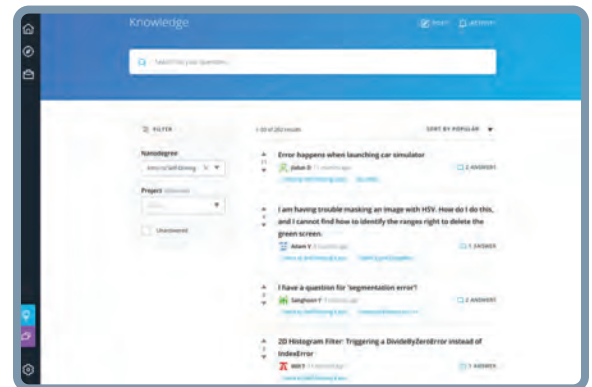
Learners leverage the power of community through a simple, yet powerful chat interface built within the classroom. Learner Hub connects learners with their technical mentor and fellow learners.

WORKSPACES

Learners can check the output and quality of their code by testing it on interactive workspaces that are integrated into the classroom.

QUIZZES

Understanding concepts learned during lessons is made simple with auto-graded quizzes. Learners can easily go back and brush up on concepts at anytime during the course.



CUSTOM STUDY PLANS

Mentors create a custom study plan tailored to learners' needs. This plan keeps track of progress toward learner goals.

PROGRESS TRACKER

Personalized milestone reminders help learners stay on track and focused as they work to complete their Nanodegree program.

Learn with the Best



Kristina Kaldon

INSTRUCTOR

Kristina studied Astronomy and Physics at Penn State University. After completing her degree, she worked with satellites at MIT Lincoln Laboratory while taking graduate courses in Aerospace Engineering. She is a self-taught RPA Developer and Program Manager on the UiPath Learning team.



Niyaz Ahmed

INSTRUCTOR

Niyaz is a Technical Consultant and Technical Trainer at UiPath, where he teaches UiPath to various academic institutions. He formerly worked as a Tech Mentor at NIIT LTD, where he mentored learners through project-based learning for various programming languages. He has an Engineering Degree from Mumbai University.

Nanodegree Program Overview

Course 1: Intro to RPA with UiPath

In this course, you will learn about RPA using UiPath, specifically how to use UiPath Studio to develop automation solutions. You'll first get a deep dive into Studio and how to use activities to program the robot to mimic actions. You'll understand how data is stored and passed between applications and actions while understanding the logical flow of execution of the actions. You'll understand how to ensure data is valid and in any format needed while learning what's available to leverage from the Microsoft coding language used in Studio. Finally, you'll learn about selectors, which are the heart of user interface identification and automation and how the robots use them to work within UI applications to successfully identify where to enter or extract data and actions.

Project 1

Sorting Annual Reports

You are tasked with organizing several annual reports from your company, but you want to be able to create an automation so that you can just click one button and automatically sort future reports! You will be given a webpage where all the reports are currently stored and will create an automation to sort them based on the name of the reports.

LESSON TITLE	LEARNING OUTCOME
INTRODUCTION TO UIPATH	<ul style="list-style-type: none">• Install and update the UiPath components and extensions, taking into account the versioning scheme.• Use the user interface of the UiPath Studio to interact with the application and design automation workflows.• Search, install, save, use and reuse activities in UiPath Studio.
VARIABLES, ARGUMENTS, & CONTROL FLOW	<ul style="list-style-type: none">• Code an automation using variables and arguments• Understand and utilize the correct data types• Code an automation using both sequences and flowcharts• Code an automation which loops through data

Nanodegree Program Overview

LESSON TITLE	LEARNING OUTCOME
DATA & STRING MANIPULATION AND UI ACTIVITY PROPERTIES	<ul style="list-style-type: none">• Prescribe data manipulation and its importance• Apply data manipulation methods suitable for RPA to different types of data structures and variables• Explain collection, its types, and manipulations• Understand and correctly use the properties of User Interface activities to make them robust, reusable, and scalable• Using VB.NET string methods, dynamically store all the files in the folder in an array variable• Using validation methods, check the file names against constraints and move the files depending on the process requirements
SELECTORS	<ul style="list-style-type: none">• Understand what is a Selector and what makes a selector robust, stable, and dynamic• Create stable and dynamic selectors• Debug selectors to fine-tune them in order to improve element manipulation precision• Understand the structure of selectors and what tags and attributes refer to• Use Anchors to manage difficult situations

Nanodegree Program Overview

Course 2: UiPath Advanced Automation Techniques and Design

In this course, you'll cover more advanced automation techniques to make you confident automating various software, web applications, and beyond. You'll learn how to extract, manipulate, and insert data within Excel and PDF documents. You'll learn about the recording options in Studio to assist you in quickly building automation projects, and how to code automation emails for input, output, and email management. In addition, you'll learn how to implement debugging techniques to ensure your code is free from errors and runs end to end. And finally, you'll be introduced to UiPath Orchestrator, a web based management tool, so you can manage your projects and use the developer functionalities to make your projects robust and scalable.

Project 2

Invoice Scraping

In this project, you will develop an automation for a process that will scrape data from and then process invoices. Your robot will read through emails and download the invoices received in the form of an email attachment. It will extract specific data and store those values in an Excel spreadsheet and a subset of values will be uploaded to the Orchestrator Queue. And finally, the robot will email the spreadsheet to you when finished.

LESSON TITLE

LEARNING OUTCOME

EXCEL, DATA
TABLES, AND PDF
AUTOMATION

- Understand the concept of DataTable and its Manipulation technique
- Identify the common methods of data manipulation for DataTables
- Code an automation using an Excel spreadsheet, datatables, and PDFs
- Automate creating and populating new Excel files from datatable variables using the Excel and Workbook automation packages within UiPath Studio.
- Extract text segments from PDF using the PDF activities

Nanodegree Program Overview

LESSON TITLE	LEARNING OUTCOME
RECORDING, UI INTERACTIONS, AND ADVANCED CITRIX AUTOMATION	<ul style="list-style-type: none">• Use the recorder to automate actions• Differentiate between actions that can be recorded automatically and actions that have to be manually recorded in UiPath• Use the Basic, Desktop and Web Recording and know the situations in which each of them is appropriate• Use the Screen Scraping wizard and configure input and output methods as appropriate to the context.• Use the Data Scraping functionality of UiPath in the appropriate contexts.• Code an automation to scrape data from various sources (web, PDF, applications) using data scraping wizard and screen scraping wizard• Perform basic Image and Text Automations as well as Virtual Machine Application Automations
EMAIL AUTOMATION	<ul style="list-style-type: none">• Identify activities suited for email automation• Code an automation to read emails using Mail activities• Code an automation to filter and download attachment from the mail• Code an automation to send emails using message template
DEBUGGING, EXCEPTION HANDLING, AND TESTING	<ul style="list-style-type: none">• Use debugging techniques to find errors• Define exception handling and use of different types of exceptions in finding errors• Run and test your automations with default values and re-usable code
INTRODUCTION TO ORCHESTRATOR	<ul style="list-style-type: none">• Define Orchestrator and its functions• Understand the concept of processes and publishing package• Connect your Studio Robot to Orchestrator and identify types of robots in Orchestrator• Understand Orchestrator Queues and Assets• Define the process for scheduling of robots

Nanodegree Program Overview

Course 3: RPA Team Best Practices

As an RPA developer, you need to understand how to handle anything thrown your way with consistent and successful methods. This course will give you the tools you need to be successful as an RPA developer and working with an RPA team. First, you'll understand how to identify and handle common challenges with RPA projects. Then, you'll learn the best way to design solutions and have clean, organized project solutions. You'll learn standard best practices to make working within a team a breeze and ensure you consider the most important aspects to well written code in Studio. Next, you'll cover an advanced topic, the Robotic Enterprise Framework, which is necessary for production level projects. Finally, you'll understand how RPA teams work together, how automation is an end-to-end process, and how it relates to AI and other technologies, as well as how to learn more and connect with the RPA community.

Project 3

RPA Code Review

As an RPA developer, you will often be called on by other RPA developers on your team to review their work. Team members review each other's code routinely before completing the end-to-end automation solution. As the RPA developer leading the project, it is your job to finish the Design Specification Document (DSD) when the development and testing is done for hand-off to the COE.

LESSON TITLE

LEARNING OUTCOME

AUTOMATION CHALLENGES

- Code an automation that interacts with a user
- Verify stability of the automation
- Catch all errors and handle them in a graceful way by reprocessing, retrying, or letting the user know when an action failed and must be manually handled
- Understand the common exceptions thrown in UiPath Studio

PROJECT ORGANIZATION

- Organize a project in an efficient and understandable way
- Ensure all business requirements from a Process Definition Document are met throughout a project (all use cases stated, all known and unknown exceptions handled, etc.)
- Test and debug each workflow (unit testing) as well as the overall project workflow

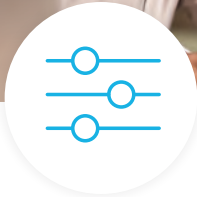
Nanodegree Program Overview

LESSON TITLE	LEARNING OUTCOME
BEST PRACTICES	<ul style="list-style-type: none">• Demonstrate advanced knowledge of best practices by correcting the project in areas of readability, logging, re-usability, and naming conventions• Build and test dynamic selectors and highlight relevant tags and attributes of those selectors• Complete project documentation and necessary sections of the Design Specification Document
RE FRAMEWORK	<ul style="list-style-type: none">• Understand the production level framework, state machines, audit logs, and retry mechanisms
CAPSTONE WORK	<ul style="list-style-type: none">• Understand how RPA fits into digital transformation• Understand expectations of each role on an RPA team

Capstone Project: Personal Use Automation

You will apply the skills you have developed throughout this Robotic Process Automation (RPA) Developer with UiPath Nanodegree to build an automation of a process in your professional or personal life. To ensure your process is impactful and a good use case for your portfolio, it will have to be a process which interacts with multiple applications, contains data manipulation, handles errors and exceptions, and has good design and reusable components. First, you will fill out all the necessary steps of the process and any requirements in the Process Definition Document (PDD). Then, you will design and build the automated solution in UiPath Studio. Finally, you will create the resulting Development Specifications Document (DSD) showcasing your solution and any dependencies needed to run it.

Our Nanodegree Programs Include:



Pre-Assessments

Our in-depth workforce assessments identify your team's current level of knowledge in key areas. Results are used to generate custom learning paths designed to equip your workforce with the most applicable skill sets.



Dashboard & Progress Reports

Our interactive dashboard (enterprise management console) allows administrators to manage employee onboarding, track course progress, perform bulk enrollments and more.



Industry Validation & Reviews

Learners' progress and subject knowledge is tested and validated by industry experts and leaders from our advisory board. These in-depth reviews ensure your teams have achieved competency.



Real World Hands-on Projects

Through a series of rigorous, real-world projects, your employees learn and apply new techniques, analyze results, and produce actionable insights. Project portfolios demonstrate learners' growing proficiency and subject mastery.

Our Review Process

Real-life Reviewers for Real-life Projects

Real-world projects are at the core of our Nanodegree programs because hands-on learning is the best way to master a new skill. Receiving relevant feedback from an industry expert is a critical part of that learning process, and infinitely more useful than that from peers or automated grading systems. Udacity has a network of over 900 experienced project reviewers who provide personalized and timely feedback to help all learners succeed.




Vaibhav
UDACITY LEARNER


"I never felt overwhelmed while pursuing the Nanodegree program due to the valuable support of the reviewers, and now I am more confident in converting my ideas to reality."

now at
CODING VISIONS INFOTECH


All Learners Benefit From:




Line-by-line feedback for coding projects



Industry tips and best practices



Advice on additional resources to research



Unlimited submissions and feedback loops

How it Works

Real-world projects are integrated within the classroom experience, making for a seamless review process flow.

- Go through the lessons and work on the projects that follow
- Get help from your technical mentor, if needed
- Submit your project work
- Receive personalized feedback from the reviewer
- If the submission is not satisfactory, resubmit your project
- Continue submitting and receiving feedback from the reviewer until you successfully complete your project

About our Project Reviewers

Our expert project reviewers are evaluated against the highest standards and graded based on learners' progress. Here's how they measure up to ensure your success.

900+

Expert Project Reviewers

Are hand-picked to provide detailed feedback on your project submissions.

1.8M

Projects Reviewed

Our reviewers have extensive experience in guiding learners through their course projects.

3

Hours Average Turnaround

You can resubmit your project on the same day for additional feedback.

4.85 /5

Average Reviewer Rating

Our learners love the quality of the feedback they receive from our experienced reviewers.



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