ROCHESTON® CERTIFIED IoT ENGINEER

Certified by Rocheston®

RCIE® Certification Program Guide

Rocheston Introduction

We provide **training**, **certification** and **accreditation** that improve an organization's business practices by defining and implementing innovative programs such as **Extreme Hacking® NeXTGEN™**, Rocheston Certified Blockchain Engineer **(RCBE)**, Certified Master of Business Leadership **(CMBL)**, Certified Chief Innovation Officer **(CCIO)** and Rocheston Certified Internet of Things Engineer **(RCIE)**.

At its core, Rocheston is an innovation company with cutting-edge research and development in emerging technologies such as Cybersecurity, Internet of Things, Big Data and automation. Our programs are carefully and comprehensively designed to impart the best of knowledge and understanding about Cybersecurity, Innovation, IoT, Big Data and Business Leadership and help professionals and companies achieve business excellence.


ROCHESTON
if you have ideas → let's create something new
thinking
Problem
Problem
Problem
the best idea
Solution

Rocheston Certified IoT Engineer (RCIE)

The **Internet of Things (IoT)** is a widespread network that connects everyday objects to the Internet, enabling them to interact with each other and exchange data. Simply put, the IoT is a concept that allows any device that can be switched-on and off to be connected to the Internet.

This could be household appliances like refrigerators, coffee makers and washing machines, paving the way for a "smart", connected home. It could also be applied on a grander scale, like with the recent Industrial Internet of Things (IIOT) revolution that automates mechanical processes in factories through IoT. It allows for two-way interactions between connected devices, and will eventually minimize the need for human intervention and manual input.

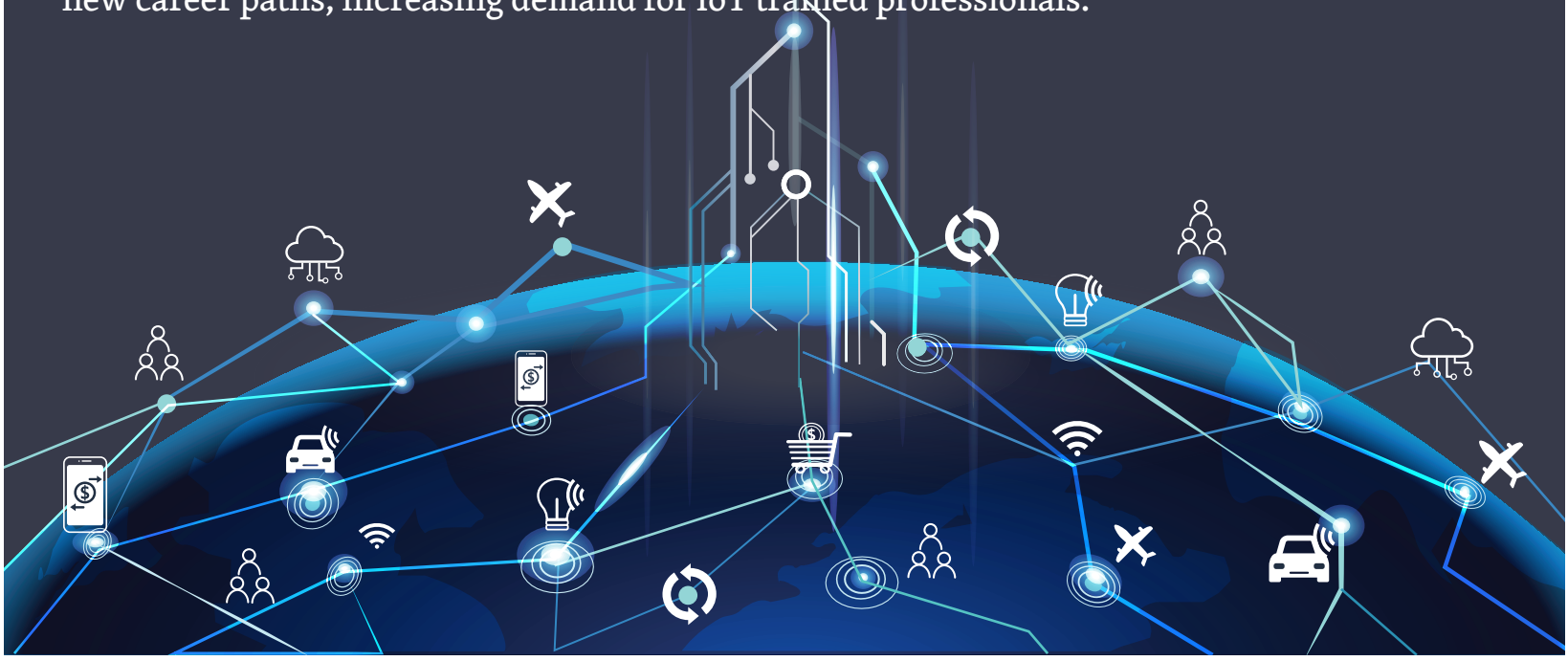
Described as the **“infrastructure of the information era”**, IoT is being touted as the next big thing in today’s world of technology. The development of IoT implies that our society is not far from transforming into a digitally connected world.

A **Rocheston Certified IoT Engineer** will be trained in the various disciplines required to navigate the challenges of the Internet of Things revolution. The course provides an understanding and an insight into **developments in networking, data management and analytics, communication devices, embedded systems and user interface design.**

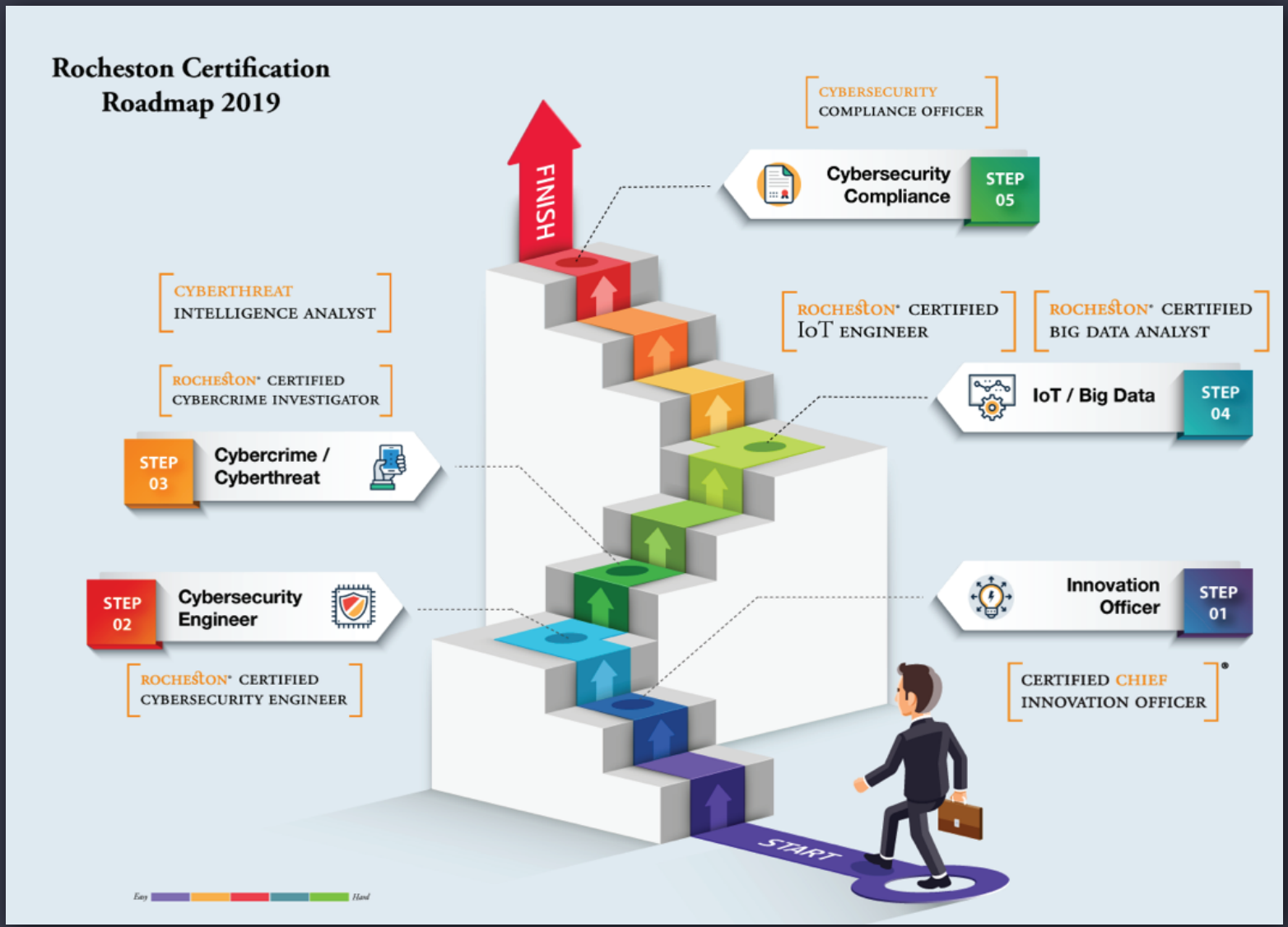
What is the Importance of RCIE?

At present, IoT finds application in the fields of Transportation, Design, Education, Healthcare, Fitness & Lifestyle and Construction. The sectors where knowledge of the IoT is being sought include **Product Management, Robotics, Hardware Engineering, Business Intelligence, Networking, Industrial Programming, Software Development, User Interface and Experience Design (UI/UX) and more.**

In addition to the importance of IoT in conventional careers such as business management, engineering software development and mobile application design, it also gives rise to several new career paths, increasing demand for IoT trained professionals.



Rocheston Roadmap



Market Trends and Job Demand

Market Trends and **Job Demand**

1. **42% of employers** are **worried** they won't be able to find the talent they need.
2. Approximately three quarters **(72.8%)** are struggling to find **relevant candidates**.
3. **86% of the most qualified candidates** for your open positions are already employed and not actively seeking a new job.
4. **40 percent of employees** surveyed said they plan on **changing jobs in 2019.**

Support

Your portal will connect you to the latest news and resources, including training resources, announcements about exams, and Rocheston training and certification products.

- **Rocheston Download Centre:** Receive comprehensive access to the entire Rocheston library of training and certification material.
- **Courseware Marketplace:** Access to all the Rocheston Online Courses
- **Courseware Support:** Get direct Rocheston support for questions on official Rocheston training and certification products.

Student Benefits/Duration

The following benefits are awarded to the students

- World Class technical kits
- Data analysis and predictive models
- Practical know how in a virtually simulated environment
- Access to virtual labs
- Immediate distinction in your profile

Duration

- 5 days classroom/e-learning **(blended learning)**
- 9:00 - 5:00 pm
- Books, Courseware, Cloud Access, Tools will be provided
- Students will be given access to Cyberclass and Cybernetwork lab access
- Students should bring their own laptop
- RCIE exam will be conducted on the last day

Job Data

Job Data

Using the globally active "**youracclaim**" portal, we have created our curriculum based on the most frequently required but specialized skillsets

Using the portal, we look at the following data with the following parameters :

- Skill Title
- Industry
- Region
- Salary Range
- Postings

Further breakup of the data will be presented upon request.

Leading Roles

Students can aspire to leading roles such as

- Hardware Engineers
- Firmware Engineers
- Mobile Developers
- Software Developers
- Data Scientists
- Network Engineers
- IoT Platform Developers
- IoT Solution Tester
- IoT Architect

Skill Titles for RCIE

- IoT Concepts
- IoT Infrastructure
- Network Architecture and Design
- Deep Learning
- IoT Programming Languages
- IoT Cloud Storage Data
- Smart Cities
- Big Data Analytics
- IoT Architect

Course Kit

The RCIE kit will contain the following items

1. IoT Sensor Kit with Arduino Uno R3
2. RCIE Voucher
3. RCIE Portal Login
4. RCIE Virtual Labs Login
5. RCIE Courseware Workbook
6. Program Guide and Training Manual
7. USB pen drive
8. Rocheston Badge
9. Rocheston Stationery (Pen and Notepads)
10. Rocheston Backpack


11 03
#THINK
OUTSIDE
THE BOX

Courseware Modules

The modules that are part of the RCIE theory course

Module 1: IoT concepts
Module 2: Infrastructure for IoT
Module 3: IoT Network Architecture and Design
Module 4: IoT Business Models
Module 5: Entrepreneurship Opportunities in IoT
Module 6: IoT Standards
Module 7: IoT Platforms
Module 8: IoT Development Boards
Module 9: IoT Circuits and Wiring
Module 10: IoT Sensors, Actuators and Smart Objects
Module 11: Interconnecting Smart Objects
Module 12: IoT Programming Languages
Module 13: IoT Network Layers
Module 14: Building Prototypes using 3D Printers
Module 15: IoT Cloud Data Storage

Module 16: Deep Learning

Module 17: Big Data Analytics

Module 18: Industry 4.0

Module 19: Smart Cities

Module 20: IoT Case Studies

Module 21: IoT Security

Module 22: Integration of IoT with Home Automation Products

Lab Modules

The modules that are part of the RCIE practical course

Module 0: Accessing USB through an Azure virtual machine
Module 1: Blinking an LED
Module 2: Reading a Potentiometer
Module 3: Driving an RGB LED
Module 4: Driving Multiple LEDs
Module 5: Push Buttons
Module 6: Reading a Photoresistor
Module 7: Reading an SPDT Switch
Module 8: Using an I2C Backlight LCD
Module 9: Reading a Temperature Sensor
Module 10: Driving a Servo Motor
Module 11: Driving a DC Motor
Module 12: Using a DC Motor driver with inputs
Module 13: Using a Piezo Buzzer
Module 14: Sound Detector
Module 15: Shift Register

Module 16: Real Time Clock Module

Module 17: 8x8 LED matrix

Module 18: Control servo motors by using joystick

Module 19: Tilt Sensor

Module 20: Water Sensor

Module 21: Driving Stepper Motor by using Stepper Motor Driver

Module 22: Relay

Module 23: Using RFID

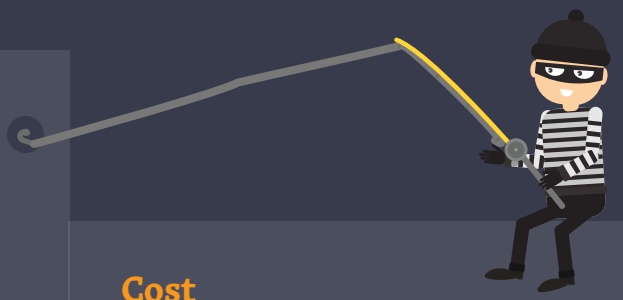
Module 24: Motion sensor(PIR) with buzzer

Module 25: Temperature and Humidity Sensor

Course Structure

What the course will consist of:

- A 5-day Training Program
- Time: 9:30 AM – 6 PM
- The Provision of an Active Web Portal
- Seminars Conducted by Qualified Engineers
- Best in-class environment
- Exam can be taken on Rocheston Cyberclass or Pearson VUE testing platform.



Cost

For pricing in your region, please contact the local distributor.

RCIE Certificate

ROCHESTON® CERTIFIED
IoT ENGINEER

THIS CERTIFICATE IS PRESENTED TO

Jason Springfield

FOR COMPLETING ALL THE REQUIREMENTS TO BECOME A
ROCHESTON CERTIFIED IoT ENGINEER

HAJA MOHIDEEN
PRESIDENT & CEO

rcie

ROCHESTON NEW YORK DISTINGUISHED

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ROCHESTON®

BE EXCEPTIONAL