



UNIVERSITAS
INDONESIA

CEP-CCIT
— FAKULTAS TEKNIK —

Continuing Education Program - Center for Computing and Information Technology
Faculty of Engineering Universitas Indonesia

Be it known that

Chrisna Firman Nugraha

Having fulfilled all the requirements and having passed all the examinations of
2 years professional programme, has been awarded the

PROFESSIONAL CERTIFICATE
in INFORMATION TECHNOLOGY

Dean

Prof. Dr. Ir. Heri Hermansyah, ST., M.Eng., IPU
NIP 197601181999031002



Director

Dr. Muhammad Suryanegara, S.T., M.Sc., IPU
NIP 198105142012121001

IoT Fundamentals: Big Data & Analytics

For completing the Cisco Networking Academy® Big Data & Analytics course, and demonstrating the ability to perform the following:

- Explain the value of data analytics for an IoT solution.
- Describe and Apply the data analysis process to solve a problem.
- Apply Python scripts to collect, prepare, analyze and visualize or export data.
- Apply basic machine learning algorithms.
- Apply data visualization and storytelling techniques to communicate results of analysis.
- Describe approaches to data management including SQL and No-SQL solutions.
- Explain the fundamental concepts behind the main Big Data platforms.

CHRISNA FIRMAN NUGRAHA

Student

Fakultas Teknik, Universitas Indonesia

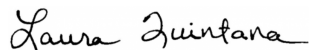
Academy Name

Indonesia

Location

23 Nov 2021

Date



Laura Quintana
VP & General Manager, Cisco Networking Academy

IoT Fundamentals: Connecting Things

For completing the Cisco Networking Academy® Connecting Things course, and demonstrating the ability to perform the following:

- Explain how IoT technologies are transforming Business and Society.
- Use sensors, actuators and micro-controllers (Arduino) to prototype an IoT solution.
- Use Python, Cisco PL-App and Raspberry Pi to prototype an IoT solution.
- Describe the role of Network and Fog Computing in an IoT solution.
- Describe how IoT Solutions can be used to digitise business applications or address social problems.
- Diagram a business model for a given business or social endeavour using the Business Model Canvas.

CHRISNA FIRMAN NUGRAHA

Student

Fakultas Teknik, Universitas Indonesia

Academy Name

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Location

23 Nov 2021

Date



Laura Quintana
VP & General Manager, Cisco Networking Academy

IoT Fundamentals: IoT Security

The student has successfully achieved student level credential for completing Cisco Networking Academy® IoT Security course administered by the undersigned instructor. The student was able to proficiently:

- Articulate specific security challenges related to the Internet of Things.
- Perform threat modeling activities on an IoT system at physical, communication and application layers.
- Use Kali Linux penetration testing tools to identify vulnerabilities in IoT systems.
- Apply threat modeling and risk assessment frameworks and recommend threat mitigation measures.
- Explain the impact of emerging technologies on IoT Security.

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Student

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Laura Quintana
VP & General Manager, Cisco Networking Academy

CERTIFICATE

003/COMM-UIIC/XI.2021



OF ACHIEVEMENT

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Chrisna Firman Nugraha

has completed the UI Investment Class committee as Vice Manager
from May 2021 to November 2021

Presiden CEDS UI 2021



Akhmad Rafif Thufail

NPM. 1806198704

Dewan Pembina



Dr. Fibria Indriati, M.Si

NIP. 197702232010122002

Project Officer UIIC



Dzulfan Hidayat

NPM. 2006604732

