



TensorFlow Developer Certificate

This certifies that

Alvin Rindra Fazrie

has passed the TensorFlow Developer Certificate exam covering foundational, practical machine learning skills through the building and training of models using TensorFlow.

A handwritten signature in black ink, likely belonging to Laurence Moroney, is placed over a red horizontal line.

Laurence Moroney
Head of TensorFlow Advocacy

Issue Date

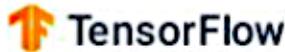
July 9, 2020

Expiration Date

July 9, 2023

Certificate ID

20460205





5 Courses

Google Cloud Platform Big Data
and Machine Learning
Fundamentals

Modernizing Data Lakes and
Data Warehouses with GCP

Building Batch Data Pipelines on
GCP

Building Resilient Streaming
Analytics Systems on GCP

Smart Analytics, Machine
Learning, and AI on GCP

Google Cloud

05/21/2020

ALVIN RINDRA FAZRIE

has successfully completed the online, non-credit Specialization

Data Engineering, Big Data, and Machine Learning on GCP

This five-course accelerated specialization is designed for data professionals who are responsible for designing, building, analyzing, and optimizing big data solutions. Through a combination of video lectures, quizzes, and hands-on labs, learners carried out serverless data analysis and productionize machine learning models. This specialization is designed to give learners a robust hands-on experience and is primarily lab-focused.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Google Cloud Training

Google Cloud Training

Verify this certificate at:
coursera.org/verify/specialization/TEHF4MZF3Q7Z



5 Courses

Google Cloud Platform
Fundamentals: Core
Infrastructure

Essential Google Cloud
Infrastructure: Foundation

Essential Google Cloud
Infrastructure: Core Services

Elastic Google Cloud
Infrastructure: Scaling and
Automation

Preparing for the Google Cloud
Associate Cloud Engineer Exam

Google Cloud

05/12/2020

ALVIN RINDRA FAZRIE

has successfully completed the online, non-credit Professional
Certificate

Google Cloud Training

Cloud Engineering with Google Cloud

In this five-course accelerated Professional Certificate, learners explored and deployed solution elements, including infrastructure components such as networks, systems and applications services using Google Cloud Platform. Learners integrated prior technical skills into practical skills for the job role of an Associate Cloud Engineer.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:
coursera.org/verify/professional-cert/HHVXKP8DLQE5



5 Courses

Neural Networks and Deep Learning

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

Structuring Machine Learning Projects

Convolutional Neural Networks

Sequence Models



09/10/2018

ALVIN RINDRA FAZRIE

has successfully completed the online, non-credit Specialization

Deep Learning

The Deep Learning Specialization is designed to prepare learners to participate in the development of cutting-edge AI technology, and to understand the capability, the challenges, and the consequences of the rise of deep learning. Through five interconnected courses, learners develop a profound knowledge of the hottest AI algorithms, mastering deep learning from its foundations (neural networks) to its industry applications (Computer Vision, Natural Language Processing, Speech Recognition, etc.).

A handwritten blue ink signature of the name "Andrew Ng".

Adjunct Professor
Andrew Ng
Computer Science

Verify this certificate at:
coursera.org/verify/specialization/DXLWRFC2C9TL

Offen im Denken

Zertifikat

University Certificate

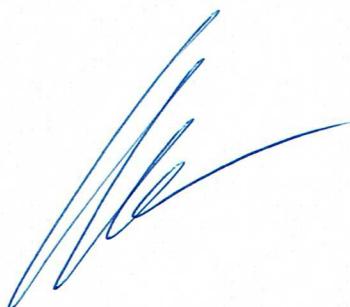
Mr.

Alvin Rindra Fazrie

has successfully attended the course

Advanced ABAP Programming

during Winter Term 2016/17 and has obtained the
certificate of performance.



Scientific Director
Faculty of Economics and Business Administration
Univ.-Prof. Dr. Heimo H. Adelsberger



Essen 21. MRZ. 2017

University Certificate *Advanced ABAP Programming*
Alvin Rindra Fazrie

The goal of the course *Advanced ABAP Programming* is to provide comprehensive and advanced concepts of ABAP programming to deepen the technical and methodological qualification of young professionals who use or plan to use ABAP for object-oriented programming in the field of SAP.

The workload for the course is 180 hours. This corresponds to 6 credit points according to the European Credit Transfer System (ECTS).

The course deals with the following topics:

- Theoretical foundation and practical programming of detailed case studies in ABAP. The following areas are covered:
 - Introduction to concepts of object-oriented programming in ABAP
 - Objects and classes
 - Modelling with UML
 - Object-oriented programming concepts
 - Inheritance
 - Abstract Classes and Interfaces
 - Event Handling
 - Tools and special concepts of object-oriented programming
 - Global Classes with the Class Builder
 - Patterns and Friendship Relations
 - Shared Objects
 - Class-based Exceptions
 - Customization of the SAP system
 - Customer Exits
 - Classical Business Add-Ins
 - Modifications
 - Customizing with the new extension concept
 - Web Dynpro
 - Controllers, Contexts and Views
 - Programming in Components
 - Internationalization and Messages
 - Further enlarging concepts
 - ALV Grid Control
 - ABAP and Unicode
 - Dynamic Programming with Field Symbols and Data References

The certificate is handed out after successful completion of the case studies.

UNIVERSITÄTS -
ZERTIFIKAT

University Certificate

Faculty of Economics and Business Administration

Mr.

Alvin Rindra Fazrie

has successfully attended the course

Introduction to SAP BW

during Summer Term 2015 and has obtained the
certificate of performance.



Dean of the Faculty of Economics and Business Administration
Univ.-Prof. Dr. Volker Clausen



Scientific Director
Univ.-Prof. Dr. Heimo H. Adelsberger



Essen

18.09.2015

University Certificate *Introduction to SAP BW*
Alvin Rindra Fazrie

The goal of the course *Introduction to SAP BW* is to provide professional and methodical qualifications for specialists who operate or plan to operate SAP BW in their daily work.

The workload for the course is 180 hours. This corresponds to 6 credit points according to the European Credit Transfer System (ECTS).

The course deals with the following topics:

- Introduction to the standard software SAP BW
 - Overview of the software vendor SAP, the technical and functional framework of SAP BW and IDES
 - Handling of SAP BW (SAP GUI – Graphical User Interface, Navigation, Help Function, Remote-Login)
- Theoretical foundation and practical processing of interactive case studies in an SAP BW System. The following areas are covered:
 - SAP BW - Enterprise Data Warehousing
 - Basic Objects in the BI-Data-Warehouse-Layer
 - Acquisition and Preparation of Data from SAP Source Systems
 - Acquisition of Data from other System
 - Business Content
 - Further Providers
 - Administration of Data Targets
 - Optimization of the Query-Performance
 - SAP BW Reporting and Query Design
 - Introduction to BI Enterprise Reporting
 - SAP BW BEx Query Designer
 - Key Figures
 - Characteristics
 - Variables
 - Exceptions and Requirements
 - SAP BI BEx Analyzer and BEx Web Analyzer
 - Information Broadcasting
 - Enterprise-Portal-Integration Document Integration
 - Report-Report-Interface
 - Managing Query-Objects
 - Business Content
 - Further Reporting Tools in SAP BI

The certificate is handed out after successful completion of the case studies.

UNIVERSITÄTS -
ZERTIFIKAT

University Certificate

Faculty of Economics and Business Administration

Mr.

Alvin Rindra Fazrie

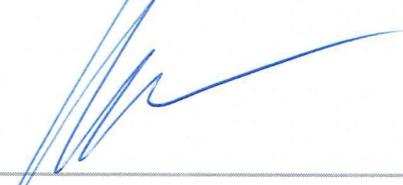
has successfully attended the course

**Integrated Business Processes
with SAP ERP (TERP10)**

during Winter Semester 2014/15 and has obtained the
certificate of performance.



Dean of the Faculty of Economics and Business Administration
Univ.-Prof. Dr. Volker Clausen



Scientific Director
Univ.-Prof. Dr. Heimo H. Adelsberger



Essen 16.03.2015

University Certificate *Integrated Business Processes with SAP ERP (TERP10)*
Alvin Rindra Fazrie

The goal of the course *Integrated Business Processes with SAP ERP (TERP10)* is to provide professional and methodical qualifications for specialists who operate or plan to operate SAP ERP in their daily work.

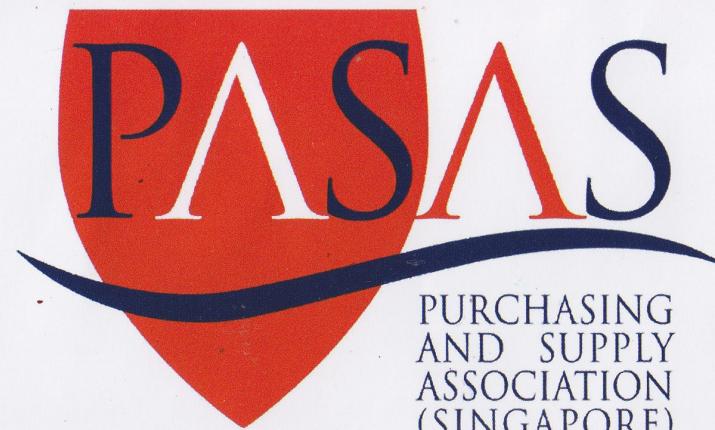
The workload for the course is 180 hours. This corresponds to 6 credit points according to the European Credit Transfer System (ECTS).

The certification covers the theoretical contents of SAP's TERP10 course with additional case studies.

The course deals with the following topics:

- Introduction to the standard software SAP ERP
 - Overview of the software vendor SAP, the technical and functional framework of SAP ERP and IDES (The Integrated Model Company for Research and Education)
 - Handling of SAP ERP (SAP GUI – Graphical User Interface, Navigation, Help Function, Remote-Login)
- Theoretical foundation and practical processing of interactive case studies in a SAP ERP System. The following areas are covered:
 - Logistics (SAP LO)
 - Procurement (MM-PUR)
 - Inventory Management (MM-IM)
 - Warehouse Management (MM-WM)
 - Production Control (PP)
 - Sales and Distribution (SD)
 - Plant Maintenance (PM)
 - Service Management (SM)
 - Project Management (PS)
 - Accounting
 - Financial Accounting (FI)
 - Controlling (CO)
 - Human Capital Management (HCM)
- Theoretical foundation in the areas
 - SAP Business Warehouse (BW)
 - SAP Business Objects (BO)

The certificate is handed out after successful completion of the case studies.



The PASAS is hereby awarded to

ALVIN RINDRA FAZRIE

The designation of

CIBIA

Certified International Business Intelligence Associate

In recognition of achievement of the
prescribed requirement in education

at PASAS
Authorized Learning Partner

Dr. Habib Kassim, BBA, MBA

DECEMBER 17, 2012

Date

DECEMBER 17, 2015

Expired

CIBIA 13.02.000036

Certificate Number