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Norwegian Embassy
Islamabad



ARTIFICIAL INTELLIGENCE DATA TECHNICIAN



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LEARNER GUIDE

National Vocational Certificate Level 2

Version 1 - November, 2019



Implemented by

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Published by

National Vocational and Technical Training Commission
Government of Pakistan

Headquarter

Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan
www.navttc.org

Responsible

Director General Skills Standard and Curricula, National Vocational and Technical Training Commission
National Deputy Head, TVET Sector Support Programme, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Layout & design

SAP Communications

Photo Credits

TVET Sector Support Programme

URL links

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This document has been produced with the technical assistance of the TVET Sector Support Programme, which is funded by the European Union, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with the National Vocational and Technical Training Commission (NAVTTTC) as well as provincial Technical Education and Vocational Training Authorities (TEVTAs), Punjab Vocational Training Council (PVTC), Qualification Awarding Bodies (QABs) and private sector organizations.

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Introduction

Welcome to your Learner's Guide for the Artificial Intelligence Data Technician programme. It will help you to complete the programme and to go on to complete further study or go straight into employment.

The Artificial Intelligence Data Technician programme is to engage young people with a programme of development that will provide them with the knowledge, skills and understanding to start this career in Pakistan. The programme has been developed to address specific issues, such as the national, regional and local cultures, the manpower availability within the country, and meeting and exceeding the needs and expectations of their customers.

The main elements of your learner's guide are:

- **Introduction:**
 - This includes a brief description of your guide and guidelines for you to use it effectively
- **Modules:**
 - The modules form the sections in your learner's guide
- **Learning Units:**
 - Learning Units are the main sections within each module
- **Learning outcomes:**
 - Learning outcomes of each learning units are taken from the curriculum document
- **Learning Elements:**
 - This is the main content of your learner's guide with detail of the knowledge and skills (practical activities, projects, assignments, practices etc.) you will require to achieve learning outcomes stated in the curriculum
 - This section will include examples, photographs and illustrations relating to each learning outcome
- **Summary of modules:**
 - This contains the summary of the modules that make up your learner's guide
- **Frequently asked questions:**
 - These have been added to provide further explanation and clarity on some of the difficult concepts and areas. This further helps you in preparing for your assessment.
- **Multiple choice questions for self-test:**
 - These are provided as an exercise at the end of your learner's guide to help you in preparing for your assessment.

Module: 061900925 Use the Spreadsheet

After this complete module the candidate will be able to gain the skills to operate the spreadsheets and work with it to manage and manipulate the documents and the different types of data.

Duration 100 hours **Theory:** 20 hours **Practical:** 80hours

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---|--|--|--|
| LU1: Perform Cell Data Manipulation | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Launch word processing application 2. Create a blank document 3. Create from template 4. Create content 5. Identify saved location <p>Save a document in desired format</p> | <ul style="list-style-type: none"> • Demonstrate different ways to open word. • Demonstrate various options that are found on word opening screen. <p>Show Highlight Menus, Taskbar, Ruler, Scroll bar etc.</p> <p>Practical-1</p> | <ol style="list-style-type: none"> 1. Computer system 2. Microsoft Office <p>Printer and paper rim</p> |
| | | <p>Create a blank document/Template, type one line and then save the file on desktop. Open the file again and save in in PDF format.</p> | |
| LU2: Perform Filtering and Sorting of numerical data | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Sort data in ascending order 2. Sort data in descending order 3. Apply single level filter <p>Apply multi-level filter</p> | <ul style="list-style-type: none"> • Understand the concept of ascending and descending order <p>Understand comparison operators such as equal to, less than, greater than, etc.</p> <p>Practical-1</p> | |
| | | <p>Write 10 random numbers in two different rows/column. Arrange them in ascending or</p> | |

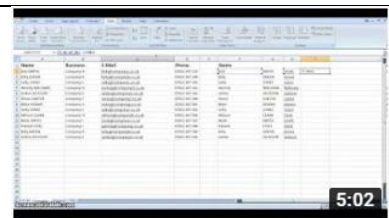
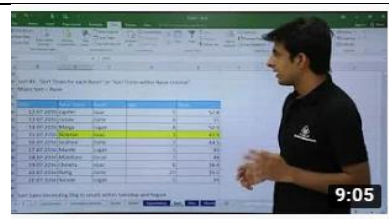
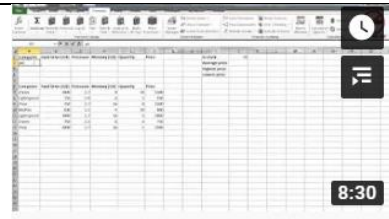
| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---|---|--|--------------------|
| | | descending order. Apply filter on one particular number form table. | |
| LU3: Apply Basic and Database Formulae | You will be able to <ol style="list-style-type: none"> 1. Create different types of data series 2. Apply arithmetic formula 3. Apply concatenation formula 4. Calculate string length using formula 5. Select desired part of string using formula 6. Copy formula using different cell referencing. 7. Use Look-up function 8. Use Count Formula 9. Use Find formula 10. Take data sum, sub, max, min, variance, mean, median, average, round using formula | <ul style="list-style-type: none"> • Understand different types of series in spreadsheet • Understand the concept of formula • Learn different formulas and their syntax <p>Understand basics of statistics</p> <p>Practical-1</p> <p>Create arithmetic and geometric series with given seed values and increment intervals</p> <p>Practical-2</p> <p>Apply formulas for concatenation, string selection, string length calculation using different cell referencing</p> <p>Practical-3</p> <p>Use find and look-up functions, different forms of count formula and apply specified arithmetic and statistical operations on given data using specified formulas.</p> | |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|-------------------------------------|--|--|--------------------|
| | 11. Take count of entities using formula 12. Take count of blanks using formula 13. Calculate minimum of entities using formula 14. Calculate maximum of entities using formula Select entity based on condition | | |
| | | | |
| LU4: Create Pivot Table | You will be able to <ol style="list-style-type: none"> 1. Select input data 2. Arrange data in an appropriate format 3. Specify output location Apply pivot table operation | Understand basic concepts and application of pivot table Practical-1 Use data in a pivot table according to given requirements | |
| | | | |
| LU5: Perform Page Formatting | You will be able to <ol style="list-style-type: none"> 1. Select page layout 2. Select page Orientation | <ul style="list-style-type: none"> • Show two basic types of page orientation • Show what are commonly used paper sizes • Demonstrate page margins and how they | |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---------------|--|---|--------------------|
| | 3. Select page size 4. Set page margins 5. Insert headers & Footer 6. Insert line numbers 7. Insert page borders and Shading | are used <ul style="list-style-type: none"> • Explain headers and footers and when they are required • Demonstrate line numbering and its uses Demonstrate page borders and shading; and why they are used Practical-1 Make following changes to document: | |
| | | <ol style="list-style-type: none"> 1. Change the orientation of document from portrait to landscape | |
| | | <ol style="list-style-type: none"> 2. Set margins manually to 1*1 inch, 3. Set page size to A4 4. Insert page numbers in footer, and your registration number in header. 1) Insert border outside borders and name as watermark in document. | |

Examples and illustrations

Videos

| | |
|--|--|
|  <p>5:02</p> | <p>Perform Cell Data Manipulation</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=Perform+Cell+Data+Manipulation</p> |
|  <p>9:05</p> | <p>Perform Filtering and Sorting of numerical data</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=Perform+Filtering+and+Sorting+of+numerical+data</p> |
|  <p>8:30</p> | <p>Apply Basic and Database Formulae excel</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=Apply+Basic+and+Database+Formulae+excel</p> |



Create Pivot Table

URL

https://www.youtube.com/results?search_query=Create+Pivot+Table

Example and Illustrations

Relevant topics and web links

| S.No | Links and definitions |
|------|---|
| 1 | How to use Excel https://spreadsheeto.com/how-to-use-excel/ |

Module: 061900926 Use Multimedia Processing

This module deals with the skills and knowledge required to perform multimedia processing, manipulate AV data in various forms for further processing

Duration 100 hours **Theory:** 40hours **Practical:** 60 hours

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|--|---|---|--|
| <p>LU1: Manipulate Image for Pre-processing</p> | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Convert image into specified format using suitable tools 2. Change resolution to the specified requirements 3. Crop the image to remove unwanted artifacts using suitable tools 4. Merge multiple images using suitable tools 5. Overlay text using suitable tools 6. Resize the image to specified size using suitable tools 7. Adjust image orientation to specified requirement using | <ul style="list-style-type: none"> • Describe basic concept of digital images • Show different for formats of images • Understand basics of image resolution • Identify specified requirements for resolution changes • Identify required tools for image cropping to remove artifacts • Demonstrate images merging tool and its usage • Identify and demonstrate use suitable tool for text overlay • Identify suitable tools and demonstrate its usage for resize of image • Identify and demonstrate suitable tools that can be used for adjustment of image orientation • Demonstrate basics of OCR (optical character recognition) <p>Demonstrate tool to prepare text based image for OCR (Optical Character Recognition)</p> | <ul style="list-style-type: none"> • Computer system with high performance GPU(s) • High speed high capacity storage • High resolution display • Software application(s) for image manipulation • Computer system with high performance GPU(s) and audio card • High quality sound system • Software application(s) for video manipulation and processing • Computer system with high performance GPU(s) and audio card • Software application(s) for audio editing • High quality sound system <p>Noise absorbers</p> |

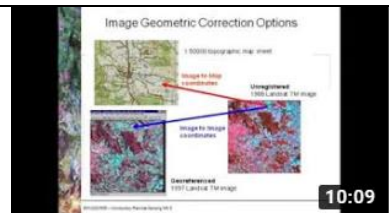
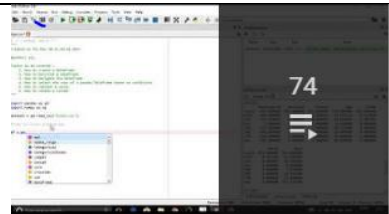

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---|---|--|--------------------|
| | suitable tools 8. Prepare text based images for OCR (optical character recognition) using suitable tools | Practical-1 Crop two images, change their orientations and merge them into single image with reduced size. Save the image in two different formats. Practical-2 | |
| | | Overlay text on an image and prepare it for Optical Character Recognition | |
| LU2: Manipulate Video for Pre-processing | You will be able to <ol style="list-style-type: none"> 1. Convert video into specified format using suitable tools 2. Change resolution of the video to the specified requirements using suitable tools 3. Crop the video to remove unwanted duration using suitable tools 4. Crop the video to remove unwanted contents using | <ul style="list-style-type: none"> • Demonstrate basic formats of digital video • Identify and Demonstrate required tool for video format conversion • Understand basics of video resolution • Know about specified requirements for resolution changes • Identify and demonstrate required tools for video cropping to remove unwanted interval • Pinpoint suitable tools for video merging • Demonstrate of frames rate and its adjustment • Perform frames extraction form videos to save it as image file Identify and Demonstrate audio editing tools and its use | |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|--|---|---|--------------------|
| | <p>suitable tools</p> <ol style="list-style-type: none"> 5. Merge multiple videos using suitable tools 6. Adjust frame rate of video 7. Extract frames from video to save them in image format 8. Modify audio tracks of video using suitable tools <p>Insert identifier in a video</p> | <p>Practical-1</p> <p>Crop two different videos into half, save them into specific video formats, reduce videos size by changing resolution and merge it into single video</p> <p>Practical-2</p> <p>Demonstrate frame rate adjustment of video and extract specified frames in image format</p> | |
| <p>LU3: Manipulate Audio for Pre-processing</p> | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Convert audio into specified format using suitable tools 2. Adjust bit rate of audio using suitable tools 3. Reduce noise from audio using suitable tools 4. Enhance audio for pre processing | <ul style="list-style-type: none"> • Understand and Demonstrate basic formats of audios • Identify required tool for audio format conversion • Pinpoint suitable tool for noise reduction <p>Demonstrate audio enhancement requirement for pre processing</p> <p>Practical-1</p> <p>Enlist different formats of audios and perform</p> | |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---------------|-------------------|--|--------------------|
| | | bit rate adjustment | |
| | | Practical-2 | |
| | | Perform preprocessing of an audio file to reduce noise and enhance audio | |

Examples and illustrations

Videos

| | |
|--|--|
|  | <p>Manipulate Image for Pre-processing</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=Manipulate+Image+for+Pre-processing</p> |
|  | <p>Manipulate Video for Pre-processing</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=%3A+Manipulate+Video+for+Pre-processing</p> |
|  | <p>Manipulate Audio for Pre-processing</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=Manipulate+Audio+for+Pre-processing</p> |
| | |

Example and Illustrations

Relevant topics and web links

| S.No | Links and definitions |
|------|--|
| 1 | Multimedia processing and its types https://www.doccity.com/en/preprocessing-multimedia-signal-processing-lecture-slides/287314/ |

Module: 061900927 Pre-Process Data

Duration 100 hours **Theory:** 40 hours **Practical:** 60hours

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|----------------------------------|--|--|--|
| LU1: Digitize Manual Data | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Scan text documents 2. Scan pictures 3. Perform OCR using suitable tool(s) 4. Enter data into text document 5. Enter data into spreadsheet 6. Digitize analogue video using suitable device 7. Digitize analogue audio using suitable device 8. Arrange audio data using suitable tools 9. Adjust image orientation to specified requirement using suitable tools | <ul style="list-style-type: none"> • Understand different digital file formats. <p>Demonstrate the interface of different software working environments for image, audio and video data pre-processing</p> <p>Practical-1</p> <p>Scan a document, extract data from the scanned image using OCR and enter the data into a specified document or spreadsheet</p> <p>Practical-2</p> <p>Use appropriate hardware and software tools to convert and save provided analogue audio and/or video to specified digital formats.</p> <p>Practical-3</p> <p>Edit given digital images, audio and video files according to specified requirements</p> | <ul style="list-style-type: none"> • Computer system with high performance GPU(s) and audio card • High speed high capacity storage • High resolution display • Software application(s) for audio editing • Scanner <p>Digital Camera</p> |



| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|---|--|--|--|
| | Prepare text based images for OCR(optical character recognition) using suitable tools | | |
| | | | |
| LU2: Prepare Data in required format | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Arrange data in specified order 2. Correct errors in digitized textual data 3. Organize data as per requirements 4. Remove unwanted data 5. Convert the digitized data into desired format and correct errors in transcribed data | <p>Understand and Demonstrate different data formatting instructions</p> <p>Practical-1</p> <p>Given an OCR generated file, edit the file i.e. arrange, remove, organize, correct and convert data based on given specifications</p> | |
| | | | |
| LU3: Label Image Data | <p>You will be able to</p> <ol style="list-style-type: none"> 1. Annotate images by text labels | <p>Understand different annotation standards</p> <p>Practical-1</p> | <ul style="list-style-type: none"> • Software application(s) for image manipulation |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|------------------------------|--|---|---|
| | 2. Annotate images by bounding box 3. Type text contained in images 5. | Perform annotations on given images as per requirements | |
| | | | |
| LU4: Label Audio Data | You will be able to 1. Apply Timestamp to transcript 2. Label audio data with text as per requirements 3. Label audio data with noise as per requirement | <ul style="list-style-type: none"> Understand the concept of timestamp in audio Understand audio labelling standards Knowledge of audio labelling tools Practical-1 Apply timestamps and label given audio data as per requirements | <ul style="list-style-type: none"> High quality sound system |
| | | | |
| LU5: Label Text Data | You will be able to 1. Annotate text data based on desired features 2. Annotate text data word by word for identification | <ul style="list-style-type: none"> Understand the concept of features Demonstrate annotation of text data based on desired features Demonstrate textual labelling standards Knowledge of text labelling tools | |

| Learning Unit | Learning Outcomes | Learning Elements | Materials Required |
|------------------------------|---|---|--|
| | (Name, City etc.) 3. Annotate text data word by word for classification | Practical-1 Point out relevant features and label given text data as per requirements such as identification and classification. | |
| LU6: Label Video Data | You will be able to 1. Apply Timestamp 2. Label video data with text as per requirements 3. Label video data with specified noise 4. Annotate image frames by text labels 5. Annotate image frames by bounding box 6. Type text contained in video | <ul style="list-style-type: none"> • Demonstrate the timestamp in videos • Demonstrate video labelling standards • Demonstrate of video labelling tools Practical-1 Apply timestamps and label given video data as per requirements | <ul style="list-style-type: none"> • High quality sound system • Software application(s) for video manipulation and processing |
| | | <ul style="list-style-type: none"> • | |

Examples and illustrations

Videos

| | |
|--|---|
|  | <p>digitize manual data</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=digitize+manual+data</p> |
|  | <p>Label Image Data</p> <p>URL</p> <p>https://www.youtube.com/results?search_query=%3A+Label+Image+Data</p> |



Label Audio, video and text Data

URL

https://www.youtube.com/results?search_query=Label+Audio%2C+video+and+text+Data

Example and Illustrations

Relevant topics and web links

| S.No | Links and definitions |
|------|--|
| 1 | How To Prepare Your Data For Machine Learning in Python with Scikit-Learn https://machinelearningmastery.com/prepare-data-machine-learning-python-scikit-learn/ |

| Module Title and Aim | Learning Units | Duration |
|--|--|----------|
| <p>Module 7: Use the spreadsheets</p> <p>Aim: This module aims to develop the knowledge, skills and understanding needed to use the spreadsheets</p> | <p>LU1: Perform Cell Data Manipulation LU2: Perform Filtering and Sorting of numerical data LU3: Apply Basic and Database Formulae LU4: Create Pivot Table LU5: Perform data plotting</p> | 100 hrs |
| <p>Module 8: Comply with Personal Health and Safety Guidelines</p> <p>Aim: This module aims to develop the knowledge, skills and understanding needed to Comply with Personal Health and Safety Guidelines</p> | <p>LU1: Identify Personal Hazards at Workplace LU2: Apply Personal Protective and Safety Equipment (PPE) LU3: Comply with Occupational Safety and Health (OSH) LU4: Dispose the hazardous Waste materials from the designated area.</p> | |
| <p>Module 9: Communicate the Workplace Policy and Procedure</p> <p>Aim: This module aims to develop the knowledge, skills and understanding needed to Communicate the Workplace Policy and Procedure</p> | <p>LU1: Identify workplace communication procedures LU2: Communicate at workplace LU3: Draft the Written Information LU4: Review the Documents</p> | |
| <p>Module 10: Perform Basic Communication (Specific)</p> <p>Aim:</p> | <p>LU1: Communicate in a team to achieve intended outcomes LU2: Follow Supervisor's instructions as per organizational SOPs LU3: Develop Generic communication skills at workplace</p> | |

| | | |
|--|---|---------|
| <p>This module aims to develop the knowledge, skills and understanding needed to Perform Basic Communication (Specific)</p> | | |
| <p>Module 11: Develop Entrepreneurial Skills Aim: This module aims to develop the knowledge, skills and understanding needed to Develop Entrepreneurial Skills</p> | <p>LU1: Develop a business plan LU2: Collect information regarding funding sources LU3: Develop a marketing plan LU4: Develop basic business communication skills</p> | |
| <p>Module 12: Demonstrate Basic Numeracy Skills Aim: This module aims to develop the knowledge, skills and understanding needed to Demonstrate Basic Numeracy Skills</p> | <p>LU1: Perform basic mathematical skills LU2: Perform Measurement LU3: Calculate Area and Volume aggregate</p> | |
| <p>Module 13: Use Multimedia Processing Aim: This module aims to develop the knowledge, skills and understanding needed to Use Multimedia Processing</p> | <p>LU1: Manipulate Image for Pre-processing LU2: Manipulate Video for Pre-processing LU3: Manipulate Audio for Pre-processing</p> | 100 hrs |
| <p>Module 14:</p> | <p>LU1: Digitize Manual Data</p> | 100hrs |

| | | |
|---|---|--|
| <p>Pre-Process Data</p> <p>Aim: This module aims to develop the knowledge, skills and understanding needed to Pre-Process Data</p> | <p>LU2: Prepare Data in required format</p> <p>LU3: Label Image Data</p> <p>LU4: Label Audio Data</p> <p>LU5: Label Text Data</p> <p>LU6: Label Video Data</p> | |
| <p>Module 15: Perform Basic Computer Application (Specific)</p> <p>Aim: This module aims to develop the knowledge, skills and understanding needed to Perform Basic Computer Application (Specific)</p> | <p>LU1: Create Word Documents</p> <p>LU2: Use internet for Browsing</p> | |

Frequently Asked Questions

| | |
|---|---|
| <p>1. What is Competency Based Training (CBT) and how is it different from currently offered trainings in institutes?</p> | <p>Competency-based training (CBT) is an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a program of training. Compared to conventional programs, the competency based training is not primarily content based; it rather focuses on the competence requirement of the envisaged job role. The whole qualification refers to certain industry standard criterion and is modularized in nature rather than being course oriented.</p> |
| <p>2. What is the passing criterion for CBT certificate?</p> | <p>You shall be required to be declared “Competent” in the summative assessment to attain the certificate.</p> |
| <p>3. What are the entry requirements for this course?</p> | <p>The entry requirement for this course is 8th Grade or equivalent.</p> |
| <p>4. How can I progress in my educational career after attaining this certificate?</p> | <p>You shall be eligible to take admission in the National Vocational Certificate Level-3 in Artificial Intelligence Data Technician. You shall be able to progress further to National Vocational Certificate Level-4 in Artificial Intelligence Data Technician (Supervisor); and take admission in a level-5, DAE or equivalent course. In certain case, you may be required to attain an equivalence certificate from The Inter Board Committee of Chairmen (IBCC).</p> |
| <p>5. If I have the experience and skills mentioned in the competency standards, do I still need to attend the course to attain this certificate?</p> | <p>You can opt to take part in the Recognition of Prior Learning (RPL) program by contacting the relevant training institute and getting assessed by providing the required evidences.</p> |
| <p>6. What is the entry requirement for Recognition of Prior Learning program (RPL)?</p> | <p>There is no general entry requirement. The institute shall assess you, identify your competence gaps and offer you courses to cover the gaps; after which you can take up the final assessment.</p> |

| | |
|---|--|
| 7. Is there any age restriction for entry in this course or Recognition of Prior Learning program (RPL)? | There are no age restrictions to enter this course or take up the Recognition of Prior Learning program |
| 8. What is the duration of this course? | The duration of the course work is 3220 hours |
| 9. What are the class timings? | The classes are normally offered 25 days a month from 08:00am to 01:30pm. These may vary according to the practices of certain institutes. |
| 10. What is equivalence of this certificate with other qualifications? | As per the national vocational qualifications framework, the level-4 certificate is equivalent to Matriculation. The criteria for equivalence and equivalence certificate can be obtained from The Inter Board Committee of Chairmen (IBCC). |
| 11. What is the importance of this certificate in National and International job market? | This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). These standards are also recognized worldwide as all the standards are coded using international methodology and are accessible to the employers worldwide through NAVTTTC website. |
| 12. Which jobs can I get after attaining this certificate? Are there job for this certificate in public sector as well? | You shall be able to take up jobs in the Artificial Intelligence Data Technician industry which comprises of development of applications for play store as well as testing and optimization of the apps. |
| 13. What are possible career progressions in industry after attaining this certificate? | You shall be able to progress up to the level of supervisor after attaining sufficient experience, knowledge and skills during the job. Attaining additional relevant qualifications may aid your career advancement to even higher levels. |
| 14. Is this certificate recognized by any competent authority in Pakistan? | This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTTC). The official certificates shall be awarded by the relevant certificate awarding body. |

| | |
|---|--|
| 15. Is on-the-job training mandatory for this certificate? If yes, what is the duration of on-the-job training? | On-the-job training is not a requirement for final / summative assessment of this certificate. However, taking up on-the-job training after or during the course work may add your chances to get a job afterwards. |
| 16. How much salary can I get on job after attaining this certificate? | The minimum wages announced by the Government of Pakistan in 2019 are PKR 17,500. This may vary in subsequent years and different regions of the country. Progressive employers may pay more than the mentioned amount. |
| 17. Are there any alternative certificates which I can take up? | There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field. |
| 18. What is the teaching language of this course? | The teaching language of this course is Urdu and English. |
| 19. Is it possible to switch to other certificate programs during the course? | There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field. |
| 20. What is the examination / assessment system in this program? | Competency based assessments are organized by training institutes during the course which serve the purpose of assessing the progress and preparedness of each student. Final / summative assessments are organized by the relevant qualification awarding bodies at the end of the certificate program. You shall be required to be declared "Competent" in the summative assessment to attain the certificate. |
| 21. Does this certificate enable me to work as freelancer? | You can start your small business/ software house related to Artificial Intelligence Data Technician and you can work as freelancer as well after the completion of the course. You may need additional skills on entrepreneurship to support your initiative. |

Test Yourself (Multiple Choice Questions)

MODULE Use of Spreadsheet

Question 1 Which one of the following options is used to cut the text in spreadsheet

A Ctrl+x

B Ctrl+v

C Ctrl+w

D Ctrl+s

Question 2 Which function tells how many numeric entries there in a cell are?

A Num

B Count

C Sum

D Chknum

Question 3 The process of arranging the items of a column in some sequence or order is known as:

- A Arranging
- B Auto Filling
- C Sorting
- D Filtering

Question 4 How can you remove borders applied in a cell?

- A Choose None on Border tab of Format cells
- B Open the list on Border tool in Formatting toolbar then choose first tool (no border)
- C Both of above
- D None of above

Question 5 Which of the following commands will you use to convert the column of data into row?

- A Cut and Paste
- B Edit >> Paste Special >> Transpose
- C Both of above
- D None of above

MODULE Use Multimedia Processing

Question 6 Joint Photographic Experts Group (JPEG) is used to compress

- A Music
- B Pictures
- C Images
- D Frames

Question 7 If frames are displayed on screen fast enough, we get an impression of

A Signals

B Motions

C Packets

D Bits

Question 8 Moving Picture Experts Group (MPEG) is used to compress

A Images

B Audio

C Video

D Images

Question 9 In Audio and Video Compression, each frame is divided into small grids, called picture elements or

- A Frame
- B Packets
- C Pixels
- D Mega Pixels

Question 10 A video consists of a sequence of

- A Frames
- B Signals
- C Packets
- D Slots

MODULE**Pre-Process Data**

- Question 11** What does OCR do?
- A Change an video file to audio
 - B Extract text from an Image
 - C Combine Images into a slideshow
 - D Check for grammatical mistakes in text
-
- Question 12** Which one of the following is not an image file format
- A JPEG
 - B JPG
 - C PNG
 - D RAR

Question 13 Why is noise added to an audio file

- A To cancel out the noise already present
- B To improve the sound variation
- C To increase the file size
- D To act as markers in the audio file

Question 14 What is a frame ?

- A Another name for a bounding box
- B An extension for image files
- C One of the many still images that compose the complete video
- D The point in an audio file where noise is inserted

Question 15 What does the term “*timestamp*” mean ?

- A A analogue record of the time of occurrence of a particular event.
- B Filmmaking.
- C A digital record of the time of occurrence of a particular event.
- D Time recording.


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