

OCCUPATIONAL CERTIFICATE

Artificial Intelligence Software Developer

Level 5 | SAQA ID – 118792



Edge Training is a proudly Level 1 B-BBEE accredited skills training provider with a national footprint and full accreditation with QCTO and SETA partners. We remain aligned with evolving QCTO regulations, ensuring that skills development in South Africa continues to meet national standards. Our commitment to compliance, excellence and quality assurance reinforces our role in strengthening the national framework and contributing meaningfully to the advancement and sustainability of skills development training.

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Qualification Information

Occupational Certificate: Artificial Intelligence Software Developer

Level 5

SAQA ID – 118792

209 Credits

Entry Requirements:

- NQF Level 4 qualification

Occupational Purpose:

The purpose of this qualification is to prepare a learner to operate as an Artificial Intelligence Software Developer.

Artificial Intelligence Software Developers build AI functionality into software applications through integrating and implementing AI algorithms and logic into the deliverables of an IT project. Developers teach the machine to solve problems the way a human would through the use of programming. They create, test, and deploy code. These developers also assist in converting machine learning APIs so that other applications can use them.

Occupational Tasks:

- Interpret solution design documentation and develop an AI solution
- Train the AI model through a machine learning process and test the performance to ensure that model accuracy is strictly maintained within the selection framework
- Deploy the AI solution and maintain the solution to ensure model accuracy is strictly maintained

Qualification Information

Purpose of the Knowledge Modules:

The knowledge acquired will enable learners to demonstrate an understanding of:

(KM-01):

- Overview of Artificial Intelligence

(KM-02):

- Introduction to Mathematics and Statistics

(KM-03):

- Analytical Thinking and Problem Solving

(KM-04):

- Data, Databases and Data Visualisation

(KM-05):

- Computing Theory

(KM-06):

- Introduction to Artificial Intelligence, Machine Learning, Deep Learning

(KM-07):

- Artificial Intelligence

(KM-08):

- Machine Learning

(KM-09):

- Deep Learning

(KM-10):

- Introduction to Governance, Legislation and Ethics

(KM-11):

- Fundamentals of Design Thinking and Innovation

(KM-12):

- 4IR and Future Skills

Qualification Information

Purpose of the Practical Modules:

The focus of the learning in the practical modules is on providing the learner an opportunity to:

(PM-01):

- Mathematics and Statistics for Programming

(PM-02):

- Problem Definition, Analytical Thinking and Decision-Making

(PM-03):

- Access, Analyse and Visualise Structured Data Using Spreadsheets

(PM-04):

- Use SQL to Communicate with a Database

(PM-05):

- Build a simple AI solution using Python

(PM-06):

- Use Python Data Scraping to Populate Database Table in SQL

(PM-07):

- Use Machine Learning to Build an AI solution in Python

(PM-08):

- Use Deep Learning to Build an AI Neural Network Architecture in Python

(PM-09):

- Use Deep Learning to Build an AI Neural Network Architecture in TensorFlow

(PM-10):

- Function Ethically and Effectively as a Member of a Multidisciplinary Team

(PM-11):

- Participate in a Design Thinking for Innovation Workshop

Qualification Information

Purpose of the Workplace Modules:

The focus of the work experience module is on providing the learner an opportunity to:

(WM-01):

- AI Solution Design Interpretation and Development

(WM-02):

- AI Solution Performance Testing

(WM-03):

- AI Solution Deployment, Modification and Improvement

Edge Training Will Provide

- Full project management of qualification
- Registration of the qualification with the relevant SETA
- Enrolment of the learner with QCTO for the qualification
- Facilitation by a Subject Matter Expert
- Venue suitable for the number of delegates
- Course material
- Monthly progress reports via the Edge Client Portal
- Booking of final exam (EISA) with the relevant SETA
- Certificates of Attendance

Qualification Structure

Artificial Intelligence Software Developer | Total Credits: 209

	Knowledge Modules	Level	Credits
KM01	Overview of Artificial Intelligence	4	2
KM02	Introduction to Mathematics and Statistics	4	10
KM03	Analytical Thinking and Problem Solving	4	3
KM04	Data, Databases and Data Visualisation	4	8
KM05	Computing Theory	4	8
KM06	Introduction to Artificial Intelligence, Machine Learning, Deep Learning	4	5
KM07	Artificial Intelligence	5	12
KM08	Machine Learning	5	16
KM09	Deep Learning	5	16
KM10	Introduction to Governance, Legislation and Ethics	4	1
KM11	Fundamentals of Design Thinking and Innovation	4	1
KM12	4IR and Future Skills	4	4

Knowledge Modules | Total Credits: 86

	Practical Modules	Level	Credits
PM01	Mathematics and Statistics for Programming	4	8
PM02	Problem Definition, Analytical Thinking and Decision-Making	4	2
PM03	Access, Analyse and Visualise Structured Data Using Spreadsheets	4	4
PM04	Use SQL to Communicate with a Database	5	4
PM05	Build a simple AI solution using Python	5	8
PM06	Use Python Data Scraping to Populate Database Table in SQL	5	4
PM07	Use Machine Learning to Build an AI solution in Python	5	6
PM08	Use Deep Learning to Build an AI Neural Network Architecture in Python	5	10
PM09	Use Deep Learning to Build an AI Neural Network Architecture in TensorFlow	5	10
PM10	Function Ethically and Effectively as a Member of a Multidisciplinary Team	4	3
PM11	Participate in a Design Thinking for Innovation Workshop	4	4

Practical Modules | Total Credits: 63

Qualification Structure

Artificial Intelligence Software Developer | Total Credits: 209

	Workplace Modules	Level	Credits
WM01	AI Solution Design Interpretation and Development	5	20
WM02	AI Solution Performance Testing	5	20
WM03	AI Solution Deployment, Modification and Improvement	5	20

Work Experience Modules | Total Credits: 60

Additional Information

Alternative titles used by the industry:

- None

Get in Touch

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We are a fully accredited training provider with BEE Level 1 certification and SSETA Accreditation #1135. Our VAT number is 4640189041, and we are registered under the number 2017 / 349079 / 07.