

## **KAIZENOVA TECHNOLOGIES LLC d/b/a TEK2KAREER**

### **Program Catalog**

#### **Artificial Intelligence & Machine Learning Applications Specialist Certificate (384 Hours)**

KaizeNova Technologies LLC d/b/a TEK2KAREER is a proprietary, non-degree-granting institution licensed (license pending) by the Michigan Department of Labor & Economic Opportunity – Workforce Development, Postsecondary Schools Unit (PSS).

This program is an approved vocational certificate program and prepares students for occupational roles in Artificial Intelligence and Machine Learning applications.

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### **PROGRAM OVERVIEW**

The *Artificial Intelligence & Machine Learning Applications Specialist Certificate* is a comprehensive, 384-hour program designed to prepare learners for high-demand AI, ML, and data automation careers.

This program provides both theoretical foundations and extensive hands-on practice in:

- Python programming for AI
- Data analysis, statistical modeling, and automation
- Machine learning fundamentals
- Deep learning (CNNs, RNNs, transformers)
- NLP and Generative AI
- MLOps, model deployment, and real-world AI integration

Students complete **five structured modules**, each aligned with industry job expectations and U.S. Department of Education CIP guidance under Artificial Intelligence (11.0102).

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### **OCCUPATIONAL OBJECTIVES**

Graduates will be prepared for roles including:

- **Artificial Intelligence Applications Specialist**
- **Machine Learning Technician / Associate Engineer**
- **Data Science Technician**
- **AI Integration Analyst**
- **Automation & Model Deployment Associate**
- **ML Ops Assistant**

- **AI Product Support Specialist**

(O\*NET 15-2051 — Data Scientists / AI Specialists)

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## PROGRAM STRUCTURE

Module	Course Title / Focus	Hours
Module 1	Python & Data Foundations for AI	64 hrs
Module 2	Machine Learning Fundamentals	96 hrs
Module 3	Deep Learning & Neural Networks	96 hrs
Module 4	NLP & Generative AI Applications	64 hrs
Module 5	AI Capstone – Model Deployment & MLOps	64 hrs
<b>Total</b>	—	<b>384 Hours</b>

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## DETAILED MODULE DESCRIPTIONS

### Module 1 — Python & Data Foundations for AI (64 Hours)

Students learn Python essentials, data structures, automation, and data cleaning using industry libraries.

#### Topics Covered:

- Python syntax, functions, logic flows
- NumPy, Pandas, Matplotlib
- Data wrangling, ETL, feature extraction
- Exploratory data analysis (EDA)
- Working with JSON, CSV, APIs
- File automation & preprocessing pipelines

#### Outcomes:

- Ability to write reusable Python scripts
  - Build data pipelines
  - Handle large datasets for ML prep
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## **Module 2 — Machine Learning Fundamentals (96 Hours)**

Applied machine learning training:

### **Topics Covered:**

- Supervised & unsupervised learning algorithms
- Regression, classification, clustering
- Train/test split, K-fold cross-validation
- Scikit-learn workflows
- Feature engineering
- Bias/variance tradeoff
- Model evaluation: precision, recall, f1, ROC-AUC

### **Outcomes:**

- Build ML models end-to-end
  - Evaluate, tune, and optimize algorithms
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## **Module 3 — Deep Learning & Neural Networks (96 Hours)**

Students gain hands-on experience with advanced deep learning.

### **Topics Covered:**

- Neural network fundamentals
- TensorFlow & PyTorch
- CNNs (vision models)
- RNNs, LSTM, GRU
- Transfer learning
- Hyperparameter tuning
- GPU acceleration
- Deep learning project workflows

### **Outcomes:**

- Build and train neural networks
  - Apply deep learning to image and text tasks
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## **Module 4 — NLP & Generative AI Applications (64 Hours)**

Students explore modern text-processing AI and generative models.

### **Topics Covered:**

- NLP preprocessing, tokenization
- Word embeddings (Word2Vec, GloVe)
- Transformer models
- ChatGPT-style architectures
- Prompt engineering fundamentals
- Text classification, summarization
- Sentiment analysis
- Conversational AI & chatbot design

### **Outcomes:**

- Apply NLP to business problems
  - Implement transformer-based workflows
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## **Module 5 — AI Capstone: Model Deployment & MLOps (64 Hours)**

Students deliver a full AI project, from architecture to deployment.

### **Topics Covered:**

- MLOps fundamentals
- Model deployment using Flask/FastAPI
- RESTful AI inference services
- TensorFlow Serving
- Version control for ML models
- GitHub Actions for ML workflows
- Cloud deployment concepts (AWS / GCP basics)

### **Capstone Deliverables:**

- Deployed AI model
- Documentation + presentation
- Code repository with automation

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## PROGRAM LENGTH & SCHEDULE

- **Total Hours:** 384 Hours
- **Length:** Up to 24 Months
- **Schedule:** 4 hours/week
- **Format:**
  - Instructor-led live classes
  - Hands-on labs
  - Applied project workshops
  - Capstone evaluation

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## TUITION & FEES

Item	Cost
Program Tuition	\$15,000
Registration Deposit (required)	\$1,000

### Payment Plans

Customized monthly installments available.

### Payment Methods

Zelle, Venmo, Stripe, PayPal, Square, Credit/Debit.

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## REFUND POLICY (LEO-Compliant)

Timing	Refund
7+ days before course start	100%
After 1–2 months	50%
After 3–4 months	25%
After 4 months	No refund

Refund requests submitted to [info@tek2kareer.com](mailto:info@tek2kareer.com)  
All refunds processed within **14 business days**.

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### **ADMISSION REQUIREMENTS**

- High school diploma / GED
- Basic computer literacy
- English proficiency
- Government-issued ID
- Stable internet + capable computer
- Completion of Enrollment Agreement

Recommended (NOT required):

- Basic Python or programming background
  - Basic math/statistics familiarity
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### **ATTENDANCE POLICY**

- 80% minimum attendance
  - More than 20% absence = failure unless approved
  - Excused absences: documented medical/family emergencies
  - Students must make up missed work
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### **GRADING POLICY**

<b>Component</b>	<b>Weight</b>
Module Assignments	30%
Quizzes & Labs	20%
Midterm ML Project	20%
Final Capstone Project	30%

**Minimum passing grade: 70%**

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## COMPLETION REQUIREMENTS

To graduate with this state-licensed certificate, students must:

- ✓ Complete all 5 modules
  - ✓ Maintain  $\geq 70\%$  overall grade
  - ✓ Complete and present the Capstone
  - ✓ Attend at least 80% of sessions
  - ✓ Submit all required assignments
  - ✓ Fulfill tuition obligations
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## TOOLS & RESOURCES PROVIDED BY SCHOOL

Students receive access to:

- Tutor LMS
- Zoom
- Python IDE (PyCharm/VS Code)
- Google Colab / Jupyter Notebooks
- TensorFlow & PyTorch
- Scikit-learn
- HuggingFace Transformers
- GitHub Repositories
- Dataset libraries (Kaggle, OpenML)

## Student Equipment Requirements

Laptop with:

- 8–16GB RAM
  - Python 3.9+
  - GPU access recommended (Colab provided)
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## INSTRUCTOR QUALIFICATIONS

All instructors must have:

- 5–10+ years of AI/ML industry experience
- Proficiency in TensorFlow/PyTorch

- Python expertise
  - Model deployment/MLOps experience
  - Prior teaching or corporate training background
  - Degree in CS, Engineering, Data Science, or equivalent industry experience
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## **DISCLAIMER**

This program is a **state-licensed vocational certificate** approved under **CIP 11.0102 – Artificial Intelligence**.

Completion does **not** guarantee employment, but prepares students for industry-recognized entry-level AI roles.