

# NEW FALL '21 COURSE

# Applied Machine Learning

- **Course Number:** 84859, EET 4996-01
- **Class Times:** T/R, 9:30-10:45 am
- **Location:** EERC 0723
- **Instructor:** Dr. Sidike Paheding
- **Course Levels:** Graduate, Undergraduate
- **Prerequisite:** Python Programming and basic knowledge of statistics.
- **Preferred knowledge:** Artificial Intelligence (CS 4811) or Data Mining (CS4821) or Intro to Data Sciences (UN 5550)

## Course Description/Overview



Michigan Tech  
College of Computing

Rapid growth and remarkable success of machine learning can be witnessed by tremendous advances in technology, contributing to the fields of healthcare, finance, agriculture, energy, education, transportation and more. This course will emphasize on intuition and real-world applications of Machine Learning (ML) rather than statistics behind it. Key concepts of some popular ML techniques, including deep learning, along with hands-on exercises will be provided to students. By the end of this course, students will be able to apply a variety of ML algorithms to practical problems, build predictive models, evaluate and analyze results.

## Instructor

**Instructor:** Sidike Paheding, Ph.D., Asst. Prof., Applied Computing

**Office:** EERC 417

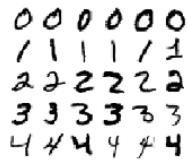
**E-mail:** spahedin@mtu.edu

**Faculty Website:** [mtu.edu/computing/about/faculty/paheding](http://mtu.edu/computing/about/faculty/paheding)

## Applications Covered



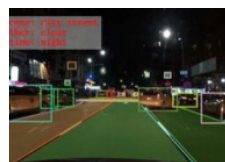
Object Detection



Digital Recognition



Face Recognition



Self-Driving Cars



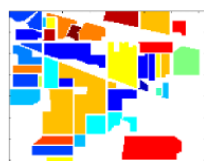
Covid-19 Prediction



Medical Image Segmentation

Go until Juong point, crazy... A  
OK lat... Jo  
Free entry in 2 a wkly comp to wir  
U dun say so early hor... U c alre  
Nah I don't think he goes to ust  
FreeMsg Hey there darling it's bee

Spam Email Detection



Spectral Signal Categorization

## Tools Covered

- Python | scikit learn | TensorFlow | Keras
- Open CV | pandas | matplotlib | NumPy
- seaborn | ANACONDA | jupyter | SPYDER