

**SUCCESSFUL TRANSITION AND ENHANCED PREPARATION FOR
UNDERGRADUATES PROGRAM (STEPUP)
MACHINE LEARNING
Summer 2018**

Department of Electrical and Computer Engineering, University of Florida

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Office Hours: Mon 12:30 PM – 1:30 PM (Location TBD)

Description: Brief overview of machine intelligence and the role of machine learning in variety of real-world problems in areas such as remote sensing. The K-Nearest Neighbor classifier will be studied and applied to remote sensing data.

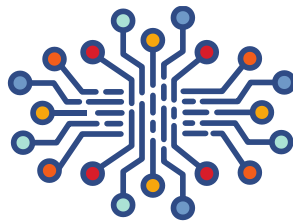
Objectives: 1) Learn what is Machine Learning
2) Learn the K-Nearest Neighbor algorithm
3) Learn how to apply the K-Nearest Neighbor algorithm to real data

References: <https://www.anaconda.com/download/>
<https://www.learnpython.org/>
<https://www.w3schools.com/python/default.asp>

Software: Homework and competition will include programming and you will report your results and analyses. We will use the Python programming language for all assignments. You will need access to a personal computer to develop and run your code on real-world datasets that we provide.

Schedule: ***This is an approximate schedule***

Dates	Topics
07/03/2018	Introduction to Machine Learning
07/05/2018	Introduction to K-Nearest Neighbors
07/10/2018	Introduction to K-Nearest Neighbors (continued)
07/12/2018	Introduction to Python and Jupyter Notebooks
07/17/2018	K-Nearest Neighbors with Examples
07/19/2018	K-Nearest Neighbors with Code
07/24/2018	Introduction into Remote Sensing
07/26/2018	Hyperspectral Data with Examples
07/31/2018	Group Competition
08/02/2018	Group Competition
08/07/2018	Group Competition
08/09/2018	Group Competition (present results and announce winners)



**THE MACHINE LEARNING
AND SENSING LABORATORY**

**DEPARTMENT OF ELECTRICAL
AND COMPUTER ENGINEERING
UNIVERSITY OF FLORIDA**