

# IDSN 599: Machine Intelligence

Lab 6

Due: Saturday, 12/11/2021, 11:59 pm

## Goal

In this lab, you calculate some statistics for an input file with numbers.

## Setup

- Create a Python file called **lp06.py**.
- Your **lp06.py** file must begin with comments in the following format (replace the name and email with your actual information):

```
'''  
Name  
IDSN 599, Fall 2021  
USC email  
Lab practical 6  
'''
```

## Requirements

Your program must perform the following:

- You must have a *processFile* function
  - It accepts 1 string as input that holds a file name
  - It returns a list of integers as output
  - It opens a file and reads in all the numbers in the file into a number list
- You must have a *getAvg* function
  - It accepts a list of integers as input
  - It returns the average of all the integers in the list
- You must have a *getMax* function
  - It accepts a list of integers as input
  - It returns the maximum value of the list (biggest value in the list)
- You must have a *getMin* function
  - It accepts a list of integers as input
  - It returns the minimum value of the list (smallest value in the list)
- You must have a *main* function
  - It accepts no input
  - It returns no output
  - It performs all the user input and output for your program
- You can find the number input file on Blackboard. Be sure to unzip it first. The numbers.txt file must be in the same folder as your lp06.py. Probably the simplest way is to create a regular file in Python – not a Python file – and call it numbers.txt. Then copy/paste the contents of the downloaded file into your new file in Pycharm. That will ensure numbers.txt is in the correct folder.

## Sample output

Below is your target output for a full run-through of the program. User input is in **red**.

Number file: **numbers.txt**

Max = 100

Min = 70

Avg = 85.54

## Deliverables

1. A compressed folder containing **lp06.py**.