

# Introduction to Computer Science

## Data Science - Assignment 1

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**Due date:** Sunday, 17 December 2017 at 23:59

**Submission instructions:** Submit your answers by sending an e-mail to `aliakbars@live.com` with the subject “ICS - *NIM*”. The name of the attached file on your e-mail should be formatted as **assignment\_ds1\_NIM.pdf**.

**Collaboration:** Do not collaborate with other students on the assignment. This is an individual assignment.

**Misconduct:** Any misconduct in this assignment will be punished accordingly.

Write a 1-2 pages summary of “Machines That Think for Themselves” by Yaser S. Abu-Mostafa. You can answer these questions from what you have read to help you write the summary:

1. In your own terms, what is machine learning?
2. Can a bunch of pre-defined if-else statements be called machine learning algorithms? Why or why not?
3. What are the challenges in producing machine learning models from the algorithms?
4. What is reinforcement learning?
5. What does it mean when a model overfits the data?