



# Capstone Project - Milestone Report

*Intermediate Data Science: Python*

Nima Ahmadi  
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## Introduction

In this report, I am going to provide my information about my capstone project.

- **Problem statement:**

Performances of trainees should be evaluated after training. There are some methods and approaches to do it. The common way is to use an eye tracker to assess participants eye movements. The reason lies in the fact the eye movements of novices and experts are different. So, researchers looked at novices and experts scanning patterns and compare them with each other. To do this, fixation points of participants should be mapped on research environment. This takes time. So, researchers looks for a way to reduce the assessment time. One way is to look at raw eye movements data, or participants gaze points. I am going to evaluate the potential of k-mean clustering in the assessment of training interventions using an eye tracking technology.

- **Potential client:**

Possible stakeholders or clients are flight schools, research centers, auto and flight company they would use this method.

- **Used data set:**

I use two data sets: eye movements of pilots (collected by an eye tracker) and flight data (collected by a flight simulator). There are steps to be taken such as (1) data synchronization, (2) dealing with missing values, (3) creating appropriate timestamps, (4) removing bugs from data, and so on. There were many challenges to synchronize data and

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get in control of data.