## **Capstone 2 – Crowd Counting**

## **Main goal of capstone 2**

Leveraging data from associate [professor Chen Change Loy’s personal website,](http://personal.ie.cuhk.edu.hk/~ccloy/downloads_mall_dataset.html) count the number of people in a given image with machine learning.

Example image:



## **Who is interested in solving this problem**

The applications of solving this problem are wide spanning.   
For example:

* The economic department of a government might be interested in counting crowds as a proxy for retail economic conditions.
* Investment firms could use crowd counting for retailers that could provide the basis for long/short stock purchases.
* A mall could offer high traffic areas to specific retailers and charge more (ex. Apple)
* The feature extraction process for counting a crowd could be transferred to other applications (ex. Crowd counting at a political rally, estimations of animal populations using a webcam in the forest etc.)
* Further advances in a crowd counting context could provide additional details on people in the image (demographics, time of day, etc.)

## **Methodology**

The crowd counting problem will be tackled using a convolutional neural network.

## **Deliverables**

* Capstone report
* Summary powerpoint
* Jupyter notebooks of the training process