Capstone 2 – Crowd Counting

Main goal of capstone 2

Leveraging data from associate professor Chen Change Loy's personal website, 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