Image classification Neural Network

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1. The Tools:

- FastAI modified to work on GPU by changing Pytorch-GPU.
- Pre-trained models Resnet34 and Resnet50
- Beautiful soup to scrape the internet.

2. Data gathering:

Scraped google for 5 classes of images using beautiful soup.

Watches	Sunglasses	Hats	Coffee	Cake
1,301 images.	1,129 images.	804 images.	1,443 images.	802 images.

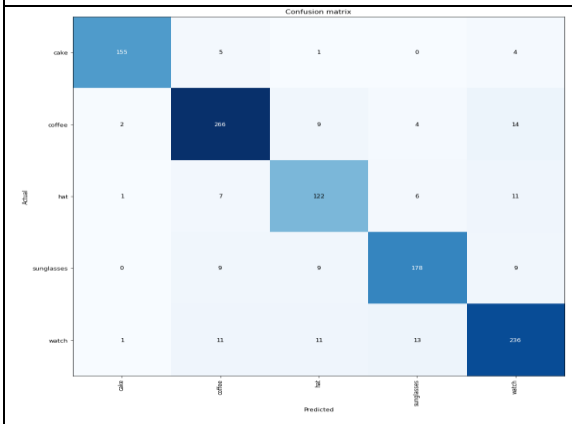
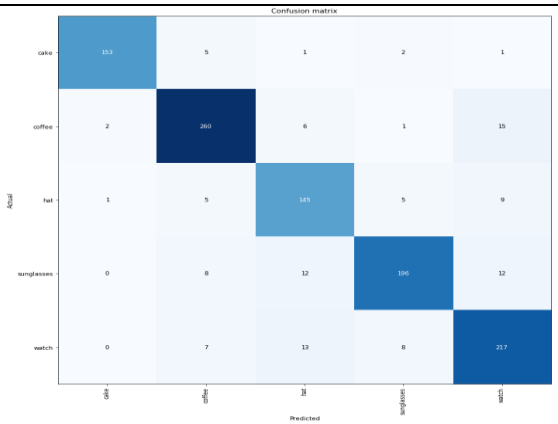
Then renamed all the photos and numbered them (i.e., *hats0001jpg, hats0002.jpg, etc.*)
Used the image name as the classes for our model

3. Data preparation:

Regular expression (*regex)* was used to extract the name of each image removing the numbering and the extension (*hats0001.jpg* becomes *hats).*
Then loading and resizing the images using FastAI's*: ImageDataBunch.*

4. The model:

Used FastAI's pre-trained models (Resnet34 and Resnet50), then tuned the image classification to classify my classes.

Resnet34	Resnet50
	
6 Epochs Batches of 8	12 Epochs Batches of 8