

Results from EfficientNetB0 (lightest model) trained on “produce\_dataset” taken by David Nystrom:

Accuracy Stat breakdown:

**Fiji:**

Top 1: 5/16 31%      Top 2: 11/16 69%      Top 3: 16/16 100%

**Granny:**

Top 1: 12/12 100%

**Red Bell pepper:**

Top 1: 9/9 100%

**Broccoli:**

Top 1: 7/9 78%      Top 2: 9/9 100%

**Banana:**

Top 1: 9/9 100%

**Orange Bell Pepper:**

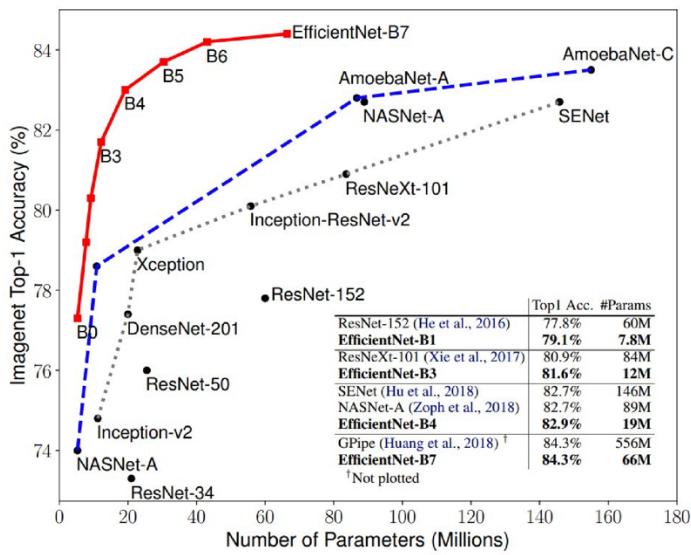
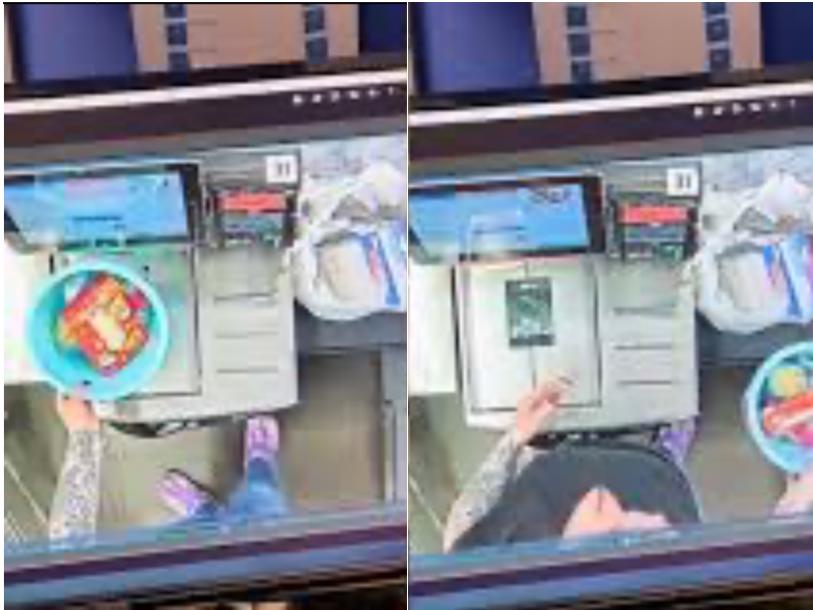
Top 1: 4/9 44%      Top 2: 8/9 89%      Top 4: 9/9 100%

Notes: Fiji apple and orange bell pepper bled together quite a bit. Both look similar.

Trained for 15 epochs, converged quickly.

Inference runs consistently around .31 seconds, with outliers in the .9 seconds. No quantizations as of yet, so we can get this down even further.

With proof of concept, one possibility is creating a new dataset of top down shots to copy security camera, IF that is the camera we are using. Not sure if there are more cameras though.

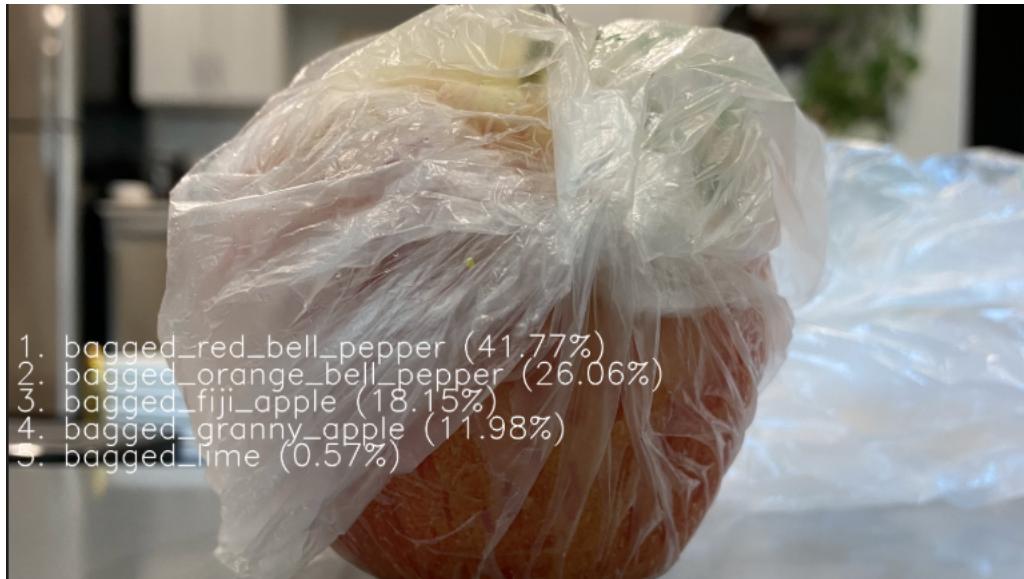




1. bagged\_fiji\_apple (82.35%)
2. fiji\_apple (10.60%)
3. bagged\_granny\_apple (3.06%)
4. bagged\_orange\_bell\_pepper (1.57%)
5. bagged\_red\_bell\_pepper (1.32%)

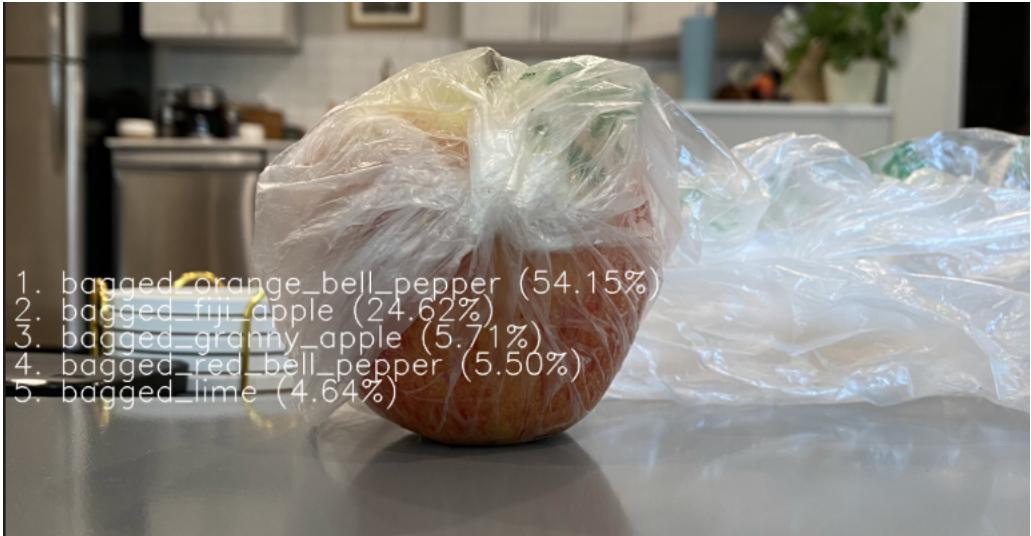


1. bagged\_broccoli (28.88%)
2. bagged\_fiji\_apple (28.38%)
3. bagged\_red\_bell\_pepper (13.49%)
4. bagged\_jalapeno (10.72%)
5. bagged\_orange\_bell\_pepper (9.73%)



1. bagged\_broccoli (26.22%)
2. bagged\_fiji\_apple (23.19%)
3. bagged\_red\_bell\_pepper (19.81%)
4. bagged\_orange\_bell\_pepper (13.37%)
5. bagged\_granny\_apple (8.38%)

1. bagged\_red\_bell\_pepper (41.77%)
2. bagged\_orange\_bell\_pepper (26.06%)
3. bagged\_fiji\_apple (18.15%)
4. bagged\_granny\_apple (11.98%)
5. bagged\_lime (0.57%)



1. bagged\_orange\_bell\_pepper (54.15%)
2. bagged\_fiji\_apple (24.62%)
3. bagged\_granny\_apple (5.71%)
4. bagged\_red\_bell\_pepper (5.50%)
5. bagged\_lime (4.64%)



1. bagged\_fiji\_apple (22.50%)
2. bagged\_granny\_apple (20.97%)
3. bagged\_orange\_bell\_pepper (19.78%)
4. fiji\_apple (9.54%)
5. bagged\_red\_bell\_pepper (7.56%)

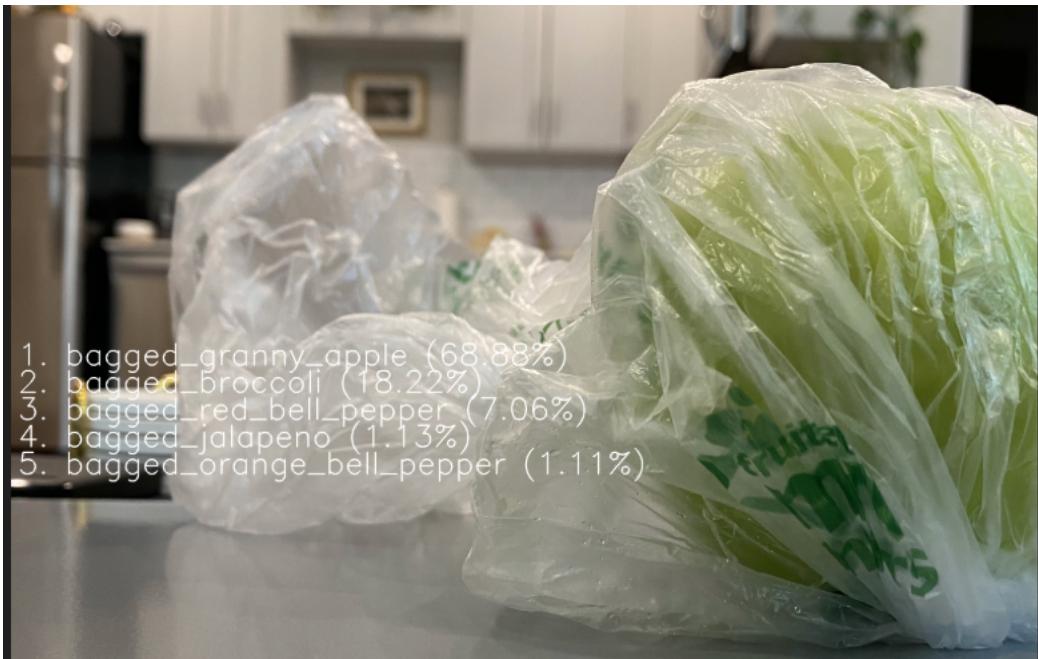


1. bagged\_fiji\_apple (41.11%)
2. bagged\_orange\_bell\_pepper (33.81%)
3. bagged\_granny\_apple (11.69%)
4. bagged\_red\_bell\_pepper (6.78%)
5. fiji\_apple (4.49%)

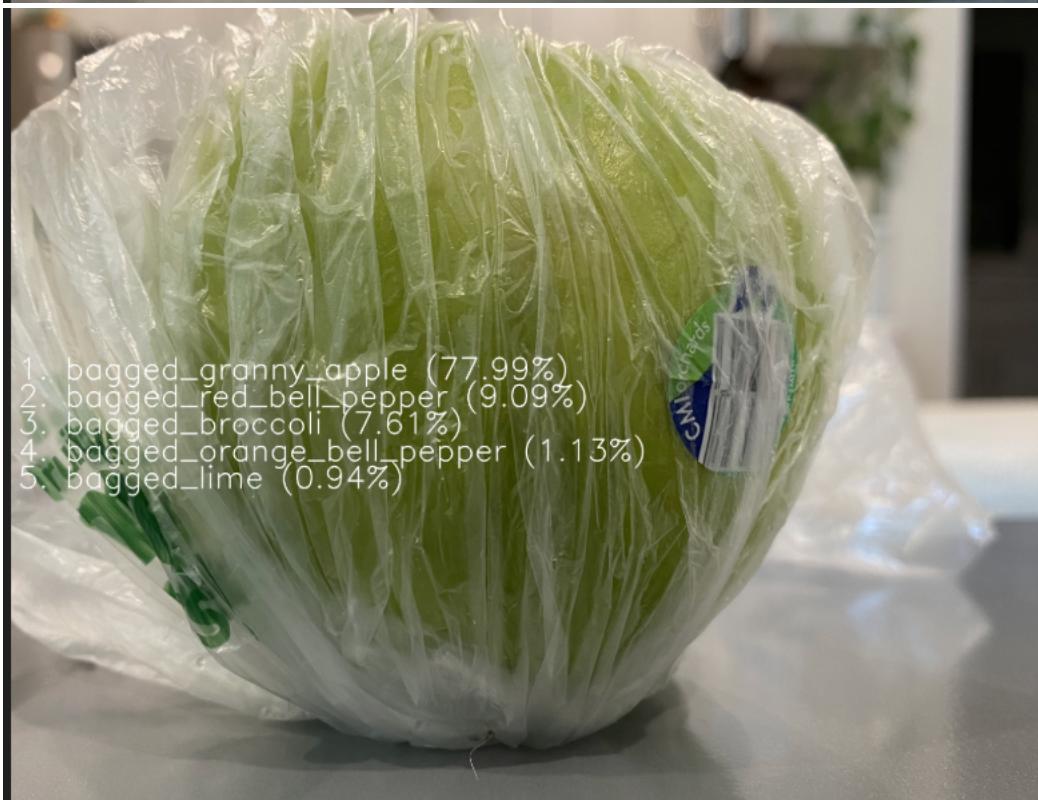


1. bagged\_fiji\_apple (27.38%)
2. bagged\_red\_bell\_pepper (17.72%)
3. bagged\_orange\_bell\_pepper (17.44%)
4. bagged\_broccoli (16.98%)
5. bagged\_granny\_apple (14.22%)





1. bagged\_granny\_apple (68.88%)
2. bagged\_broccoli (18.22%)
3. bagged\_red\_bell\_pepper (7.06%)
4. bagged\_jalapeno (1.13%)
5. bagged\_orange\_bell\_pepper (1.11%)



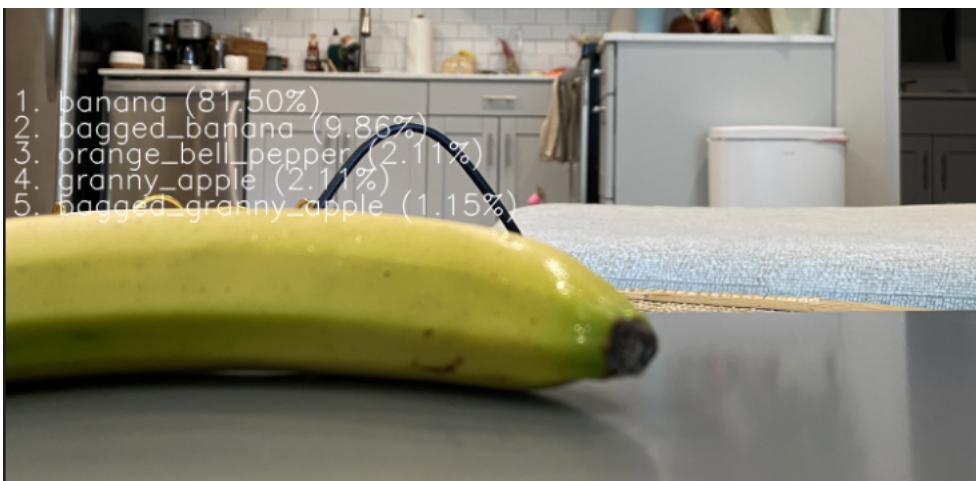
1. bagged\_granny\_apple (77.99%)
2. bagged\_red\_bell\_pepper (9.09%)
3. bagged\_broccoli (7.61%)
4. bagged\_orange\_bell\_pepper (1.13%)
5. bagged\_lime (0.94%)



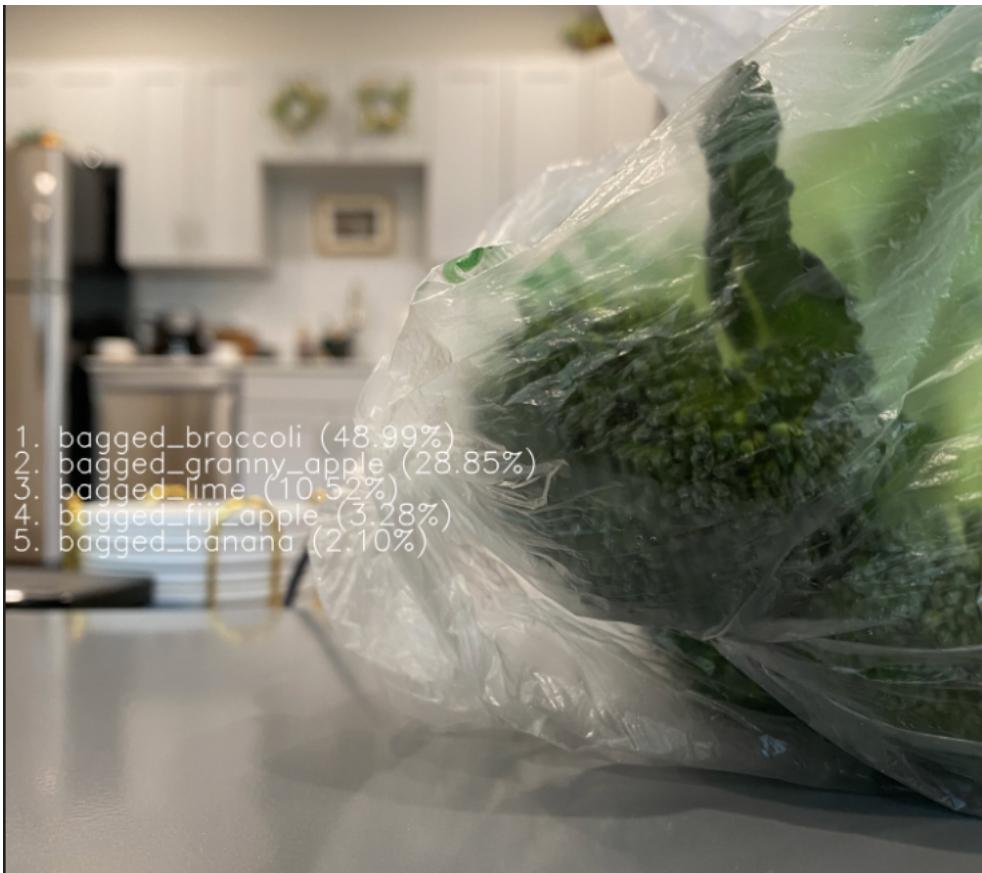
1. bagged\_orange\_bell\_pepper (82.73%)
2. bagged\_red\_bell\_pepper (12.78%)
3. bagged\_fiji\_apple (2.91%)
4. bagged\_granny\_apple (0.82%)
5. bagged\_broccoli (0.30%)



1. bagged\_orange\_bell\_pepper (71.99%)
2. bagged\_fiji\_apple (23.43%)
3. bagged\_red\_bell\_pepper (2.04%)
4. bagged\_broccoli (1.05%)
5. bagged\_granny\_apple (0.51%)



1. banana (81.50%)
2. bagged\_banana (9.86%)
3. orange\_bell\_pepper (2.11%)
4. granny\_apple (2.11%)
5. bagged\_granny\_apple (1.15%)



1. bagged\_broccoli (48.99%)
2. bagged\_granny\_apple (28.85%)
3. bagged\_lime (10.52%)
4. bagged\_fiji\_apple (3.28%)
5. bagged\_banana (2.10%)



1. bagged\_red\_bell\_pepper (91.57%)
2. bagged\_orange\_bell\_pepper (2.48%)
3. bagged\_broccoli (2.14%)
4. red\_bell\_pepper (1.17%)
5. bagged\_fiji\_apple (0.95%)