At epoch 1, batch 51, having loss: 1.605

At epoch 1, batch 101, having loss: 1.326

At epoch 1, batch 151, having loss: 1.145

At epoch 1, batch 201, having loss: 1.030

At epoch 1, batch 251, having loss: 0.982

At epoch 1, batch 301, having loss: 0.946

At epoch 1, batch 351, having loss: 0.901

At epoch 1, batch 401, having loss: 0.863

Epoch: 1, Loss: 0.839, Training Accuracy: 0.726

Validation Accuracy: 0.81, Total items: 1746

At epoch 2, batch 51, having loss: 0.591

At epoch 2, batch 101, having loss: 0.566

At epoch 2, batch 151, having loss: 0.553

At epoch 2, batch 201, having loss: 0.534

At epoch 2, batch 251, having loss: 0.557

At epoch 2, batch 301, having loss: 0.553

At epoch 2, batch 351, having loss: 0.556

At epoch 2, batch 401, having loss: 0.549

Epoch: 2, Loss: 0.547, Training Accuracy: 0.825

Validation Accuracy: 0.78, Total items: 1746

At epoch 3, batch 51, having loss: 0.453

At epoch 3, batch 101, having loss: 0.428

At epoch 3, batch 151, having loss: 0.447

At epoch 3, batch 201, having loss: 0.464

At epoch 3, batch 251, having loss: 0.458

At epoch 3, batch 301, having loss: 0.464

At epoch 3, batch 351, having loss: 0.477

At epoch 3, batch 401, having loss: 0.492

Epoch: 3, Loss: 0.504, Training Accuracy: 0.835

Validation Accuracy: 0.83, Total items: 1746

At epoch 4, batch 51, having loss: 0.488

At epoch 4, batch 101, having loss: 0.438

At epoch 4, batch 151, having loss: 0.431

At epoch 4, batch 201, having loss: 0.427

At epoch 4, batch 251, having loss: 0.423

At epoch 4, batch 301, having loss: 0.441

At epoch 4, batch 351, having loss: 0.445

At epoch 4, batch 401, having loss: 0.450

Epoch: 4, Loss: 0.442, Training Accuracy: 0.864

Validation Accuracy: 0.88, Total items: 1746

At epoch 5, batch 51, having loss: 0.379

At epoch 5, batch 101, having loss: 0.354

At epoch 5, batch 151, having loss: 0.348

At epoch 5, batch 201, having loss: 0.353

At epoch 5, batch 251, having loss: 0.354

At epoch 5, batch 301, having loss: 0.350

At epoch 5, batch 351, having loss: 0.356

At epoch 5, batch 401, having loss: 0.375

Epoch: 5, Loss: 0.372, Training Accuracy: 0.880

Validation Accuracy: 0.88, Total items: 1746

At epoch 6, batch 51, having loss: 0.346

At epoch 6, batch 101, having loss: 0.322

At epoch 6, batch 151, having loss: 0.354

At epoch 6, batch 201, having loss: 0.357

At epoch 6, batch 251, having loss: 0.369

At epoch 6, batch 301, having loss: 0.386

At epoch 6, batch 351, having loss: 0.386

At epoch 6, batch 401, having loss: 0.379

Epoch: 6, Loss: 0.376, Training Accuracy: 0.882

Validation Accuracy: 0.88, Total items: 1746

At epoch 7, batch 51, having loss: 0.306

At epoch 7, batch 101, having loss: 0.325

At epoch 7, batch 151, having loss: 0.338

At epoch 7, batch 201, having loss: 0.354

At epoch 7, batch 251, having loss: 0.347

At epoch 7, batch 301, having loss: 0.350

At epoch 7, batch 351, having loss: 0.347

At epoch 7, batch 401, having loss: 0.347

Epoch: 7, Loss: 0.351, Training Accuracy: 0.890

Validation Accuracy: 0.85, Total items: 1746

At epoch 8, batch 51, having loss: 0.400

At epoch 8, batch 101, having loss: 0.375

At epoch 8, batch 151, having loss: 0.375

At epoch 8, batch 201, having loss: 0.385

At epoch 8, batch 251, having loss: 0.374

At epoch 8, batch 301, having loss: 0.377

At epoch 8, batch 351, having loss: 0.371

At epoch 8, batch 401, having loss: 0.358

Epoch: 8, Loss: 0.352, Training Accuracy: 0.891

Validation Accuracy: 0.87, Total items: 1746

At epoch 9, batch 51, having loss: 0.354

At epoch 9, batch 101, having loss: 0.373

At epoch 9, batch 151, having loss: 0.366

At epoch 9, batch 201, having loss: 0.362

At epoch 9, batch 251, having loss: 0.362

At epoch 9, batch 301, having loss: 0.352

At epoch 9, batch 351, having loss: 0.371

At epoch 9, batch 401, having loss: 0.374

Epoch: 9, Loss: 0.371, Training Accuracy: 0.886

Validation Accuracy: 0.86, Total items: 1746

At epoch 10, batch 51, having loss: 0.415

At epoch 10, batch 101, having loss: 0.418

At epoch 10, batch 151, having loss: 0.379

At epoch 10, batch 201, having loss: 0.378

At epoch 10, batch 251, having loss: 0.384

At epoch 10, batch 301, having loss: 0.377

At epoch 10, batch 351, having loss: 0.376

At epoch 10, batch 401, having loss: 0.373

Epoch: 10, Loss: 0.374, Training Accuracy: 0.879

Validation Accuracy: 0.82, Total items: 1746

At epoch 11, batch 51, having loss: 0.419

At epoch 11, batch 101, having loss: 0.392

At epoch 11, batch 151, having loss: 0.387

At epoch 11, batch 201, having loss: 0.389

At epoch 11, batch 251, having loss: 0.411

At epoch 11, batch 301, having loss: 0.409

At epoch 11, batch 351, having loss: 0.404

At epoch 11, batch 401, having loss: 0.422

Epoch: 11, Loss: 0.428, Training Accuracy: 0.870

Validation Accuracy: 0.83, Total items: 1746

At epoch 12, batch 51, having loss: 0.512

At epoch 12, batch 101, having loss: 0.444

At epoch 12, batch 151, having loss: 0.417

At epoch 12, batch 201, having loss: 0.401

At epoch 12, batch 251, having loss: 0.388

At epoch 12, batch 301, having loss: 0.401

At epoch 12, batch 351, having loss: 0.398

At epoch 12, batch 401, having loss: 0.417

Epoch: 12, Loss: 0.426, Training Accuracy: 0.865

Validation Accuracy: 0.82, Total items: 1746

At epoch 13, batch 51, having loss: 0.466

At epoch 13, batch 101, having loss: 0.435

At epoch 13, batch 151, having loss: 0.412

At epoch 13, batch 201, having loss: 0.401

At epoch 13, batch 251, having loss: 0.389

At epoch 13, batch 301, having loss: 0.382

At epoch 13, batch 351, having loss: 0.372

At epoch 13, batch 401, having loss: 0.378

Epoch: 13, Loss: 0.379, Training Accuracy: 0.878

Validation Accuracy: 0.87, Total items: 1746

At epoch 14, batch 51, having loss: 0.418

At epoch 14, batch 101, having loss: 0.424

At epoch 14, batch 151, having loss: 0.432

At epoch 14, batch 201, having loss: 0.449

At epoch 14, batch 251, having loss: 0.459

At epoch 14, batch 301, having loss: 0.447

At epoch 14, batch 351, having loss: 0.430

At epoch 14, batch 401, having loss: 0.421

Epoch: 14, Loss: 0.415, Training Accuracy: 0.869

Validation Accuracy: 0.89, Total items: 1746

At epoch 15, batch 51, having loss: 0.281

At epoch 15, batch 101, having loss: 0.308

At epoch 15, batch 151, having loss: 0.308

At epoch 15, batch 201, having loss: 0.299

At epoch 15, batch 251, having loss: 0.282

At epoch 15, batch 301, having loss: 0.293

At epoch 15, batch 351, having loss: 0.301

At epoch 15, batch 401, having loss: 0.307

Epoch: 15, Loss: 0.308, Training Accuracy: 0.903

Validation Accuracy: 0.90, Total items: 1746

At epoch 16, batch 51, having loss: 0.269

At epoch 16, batch 101, having loss: 0.268

At epoch 16, batch 151, having loss: 0.278

At epoch 16, batch 201, having loss: 0.289

At epoch 16, batch 251, having loss: 0.283

At epoch 16, batch 301, having loss: 0.292

At epoch 16, batch 351, having loss: 0.289

At epoch 16, batch 401, having loss: 0.304

Epoch: 16, Loss: 0.320, Training Accuracy: 0.900

Validation Accuracy: 0.86, Total items: 1746

At epoch 17, batch 51, having loss: 0.377

At epoch 17, batch 101, having loss: 0.323

At epoch 17, batch 151, having loss: 0.319

At epoch 17, batch 201, having loss: 0.318

At epoch 17, batch 251, having loss: 0.313

At epoch 17, batch 301, having loss: 0.293

At epoch 17, batch 351, having loss: 0.285

At epoch 17, batch 401, having loss: 0.291

Epoch: 17, Loss: 0.287, Training Accuracy: 0.907

Validation Accuracy: 0.89, Total items: 1746

At epoch 18, batch 51, having loss: 0.226

At epoch 18, batch 101, having loss: 0.249

At epoch 18, batch 151, having loss: 0.235

At epoch 18, batch 201, having loss: 0.239

At epoch 18, batch 251, having loss: 0.235

At epoch 18, batch 301, having loss: 0.233

At epoch 18, batch 351, having loss: 0.234

At epoch 18, batch 401, having loss: 0.234

Epoch: 18, Loss: 0.240, Training Accuracy: 0.923

Validation Accuracy: 0.90, Total items: 1746

At epoch 19, batch 51, having loss: 0.208

At epoch 19, batch 101, having loss: 0.212

At epoch 19, batch 151, having loss: 0.214

At epoch 19, batch 201, having loss: 0.207

At epoch 19, batch 251, having loss: 0.212

At epoch 19, batch 301, having loss: 0.222

At epoch 19, batch 351, having loss: 0.238

At epoch 19, batch 401, having loss: 0.242

Epoch: 19, Loss: 0.262, Training Accuracy: 0.918

Validation Accuracy: 0.86, Total items: 1746

At epoch 20, batch 51, having loss: 0.317

At epoch 20, batch 101, having loss: 0.285

At epoch 20, batch 151, having loss: 0.296

At epoch 20, batch 201, having loss: 0.269

At epoch 20, batch 251, having loss: 0.260

At epoch 20, batch 301, having loss: 0.255

At epoch 20, batch 351, having loss: 0.251

At epoch 20, batch 401, having loss: 0.242

Epoch: 20, Loss: 0.241, Training Accuracy: 0.922

Validation Accuracy: 0.93, Total items: 1746

At epoch 21, batch 51, having loss: 0.157

At epoch 21, batch 101, having loss: 0.146

At epoch 21, batch 151, having loss: 0.147

At epoch 21, batch 201, having loss: 0.161

At epoch 21, batch 251, having loss: 0.192

At epoch 21, batch 301, having loss: 0.187

At epoch 21, batch 351, having loss: 0.180

At epoch 21, batch 401, having loss: 0.184

Epoch: 21, Loss: 0.187, Training Accuracy: 0.941

Validation Accuracy: 0.91, Total items: 1746

At epoch 22, batch 51, having loss: 0.164

At epoch 22, batch 101, having loss: 0.155

At epoch 22, batch 151, having loss: 0.151

At epoch 22, batch 201, having loss: 0.171

At epoch 22, batch 251, having loss: 0.186

At epoch 22, batch 301, having loss: 0.196

At epoch 22, batch 351, having loss: 0.196

At epoch 22, batch 401, having loss: 0.194

Epoch: 22, Loss: 0.191, Training Accuracy: 0.936

Validation Accuracy: 0.93, Total items: 1746

At epoch 23, batch 51, having loss: 0.172

At epoch 23, batch 101, having loss: 0.149

At epoch 23, batch 151, having loss: 0.158

At epoch 23, batch 201, having loss: 0.159

At epoch 23, batch 251, having loss: 0.161

At epoch 23, batch 301, having loss: 0.152

At epoch 23, batch 351, having loss: 0.147

At epoch 23, batch 401, having loss: 0.148

Epoch: 23, Loss: 0.149, Training Accuracy: 0.950

Validation Accuracy: 0.94, Total items: 1746

At epoch 24, batch 51, having loss: 0.113

At epoch 24, batch 101, having loss: 0.128

At epoch 24, batch 151, having loss: 0.127

At epoch 24, batch 201, having loss: 0.121

At epoch 24, batch 251, having loss: 0.128

At epoch 24, batch 301, having loss: 0.144

At epoch 24, batch 351, having loss: 0.146

At epoch 24, batch 401, having loss: 0.146

Epoch: 24, Loss: 0.142, Training Accuracy: 0.956

Validation Accuracy: 0.93, Total items: 1746

At epoch 25, batch 51, having loss: 0.137

At epoch 25, batch 101, having loss: 0.121

At epoch 25, batch 151, having loss: 0.128

At epoch 25, batch 201, having loss: 0.123

At epoch 25, batch 251, having loss: 0.125

At epoch 25, batch 301, having loss: 0.123

At epoch 25, batch 351, having loss: 0.129

At epoch 25, batch 401, having loss: 0.131

Epoch: 25, Loss: 0.130, Training Accuracy: 0.956

Validation Accuracy: 0.93, Total items: 1746

At epoch 26, batch 51, having loss: 0.165

At epoch 26, batch 101, having loss: 0.139

At epoch 26, batch 151, having loss: 0.152

At epoch 26, batch 201, having loss: 0.145

At epoch 26, batch 251, having loss: 0.133

At epoch 26, batch 301, having loss: 0.136

At epoch 26, batch 351, having loss: 0.133

At epoch 26, batch 401, having loss: 0.132

Epoch: 26, Loss: 0.132, Training Accuracy: 0.957

Validation Accuracy: 0.94, Total items: 1746

At epoch 27, batch 51, having loss: 0.076

At epoch 27, batch 101, having loss: 0.066

At epoch 27, batch 151, having loss: 0.092

At epoch 27, batch 201, having loss: 0.099

At epoch 27, batch 251, having loss: 0.096

At epoch 27, batch 301, having loss: 0.100

At epoch 27, batch 351, having loss: 0.109

At epoch 27, batch 401, having loss: 0.112

Epoch: 27, Loss: 0.111, Training Accuracy: 0.967

Validation Accuracy: 0.94, Total items: 1746

At epoch 28, batch 51, having loss: 0.082

At epoch 28, batch 101, having loss: 0.104

At epoch 28, batch 151, having loss: 0.107

At epoch 28, batch 201, having loss: 0.109

At epoch 28, batch 251, having loss: 0.104

At epoch 28, batch 301, having loss: 0.108

At epoch 28, batch 351, having loss: 0.107

At epoch 28, batch 401, having loss: 0.109

Epoch: 28, Loss: 0.108, Training Accuracy: 0.965

Validation Accuracy: 0.95, Total items: 1746

At epoch 29, batch 51, having loss: 0.082

At epoch 29, batch 101, having loss: 0.084

At epoch 29, batch 151, having loss: 0.080

At epoch 29, batch 201, having loss: 0.079

At epoch 29, batch 251, having loss: 0.074

At epoch 29, batch 301, having loss: 0.076

At epoch 29, batch 351, having loss: 0.086

At epoch 29, batch 401, having loss: 0.087

Epoch: 29, Loss: 0.086, Training Accuracy: 0.972

Validation Accuracy: 0.94, Total items: 1746

At epoch 30, batch 51, having loss: 0.125

At epoch 30, batch 101, having loss: 0.105

At epoch 30, batch 151, having loss: 0.113

At epoch 30, batch 201, having loss: 0.108

At epoch 30, batch 251, having loss: 0.103

At epoch 30, batch 301, having loss: 0.095

At epoch 30, batch 351, having loss: 0.092

At epoch 30, batch 401, having loss: 0.089

Epoch: 30, Loss: 0.087, Training Accuracy: 0.969

Validation Accuracy: 0.95, Total items: 1746

At epoch 31, batch 51, having loss: 0.093

At epoch 31, batch 101, having loss: 0.088

At epoch 31, batch 151, having loss: 0.088

At epoch 31, batch 201, having loss: 0.079

At epoch 31, batch 251, having loss: 0.076

At epoch 31, batch 301, having loss: 0.073

At epoch 31, batch 351, having loss: 0.072

At epoch 31, batch 401, having loss: 0.073

Epoch: 31, Loss: 0.075, Training Accuracy: 0.975

Validation Accuracy: 0.96, Total items: 1746

At epoch 32, batch 51, having loss: 0.088

At epoch 32, batch 101, having loss: 0.083

At epoch 32, batch 151, having loss: 0.090

At epoch 32, batch 201, having loss: 0.089

At epoch 32, batch 251, having loss: 0.085

At epoch 32, batch 301, having loss: 0.084

At epoch 32, batch 351, having loss: 0.083

At epoch 32, batch 401, having loss: 0.082

Epoch: 32, Loss: 0.083, Training Accuracy: 0.974

Validation Accuracy: 0.95, Total items: 1746

At epoch 33, batch 51, having loss: 0.071

At epoch 33, batch 101, having loss: 0.062

At epoch 33, batch 151, having loss: 0.068

At epoch 33, batch 201, having loss: 0.074

At epoch 33, batch 251, having loss: 0.071

At epoch 33, batch 301, having loss: 0.071

At epoch 33, batch 351, having loss: 0.072

At epoch 33, batch 401, having loss: 0.073

Epoch: 33, Loss: 0.075, Training Accuracy: 0.976

Validation Accuracy: 0.96, Total items: 1746

At epoch 34, batch 51, having loss: 0.050

At epoch 34, batch 101, having loss: 0.043

At epoch 34, batch 151, having loss: 0.043

At epoch 34, batch 201, having loss: 0.042

At epoch 34, batch 251, having loss: 0.052

At epoch 34, batch 301, having loss: 0.052

At epoch 34, batch 351, having loss: 0.051

At epoch 34, batch 401, having loss: 0.052

Epoch: 34, Loss: 0.052, Training Accuracy: 0.984

Validation Accuracy: 0.96, Total items: 1746

At epoch 35, batch 51, having loss: 0.064

At epoch 35, batch 101, having loss: 0.068

At epoch 35, batch 151, having loss: 0.072

At epoch 35, batch 201, having loss: 0.066

At epoch 35, batch 251, having loss: 0.073

At epoch 35, batch 301, having loss: 0.069

At epoch 35, batch 351, having loss: 0.066

At epoch 35, batch 401, having loss: 0.064

Epoch: 35, Loss: 0.062, Training Accuracy: 0.982

Validation Accuracy: 0.96, Total items: 1746

At epoch 36, batch 51, having loss: 0.051

At epoch 36, batch 101, having loss: 0.059

At epoch 36, batch 151, having loss: 0.049

At epoch 36, batch 201, having loss: 0.046

At epoch 36, batch 251, having loss: 0.041

At epoch 36, batch 301, having loss: 0.044

At epoch 36, batch 351, having loss: 0.043

At epoch 36, batch 401, having loss: 0.050

Epoch: 36, Loss: 0.051, Training Accuracy: 0.984

Validation Accuracy: 0.96, Total items: 1746

At epoch 37, batch 51, having loss: 0.036

At epoch 37, batch 101, having loss: 0.044

At epoch 37, batch 151, having loss: 0.059

At epoch 37, batch 201, having loss: 0.053

At epoch 37, batch 251, having loss: 0.051

At epoch 37, batch 301, having loss: 0.053

At epoch 37, batch 351, having loss: 0.050

At epoch 37, batch 401, having loss: 0.048

Epoch: 37, Loss: 0.048, Training Accuracy: 0.984

Validation Accuracy: 0.96, Total items: 1746

At epoch 38, batch 51, having loss: 0.044

At epoch 38, batch 101, having loss: 0.037

At epoch 38, batch 151, having loss: 0.034

At epoch 38, batch 201, having loss: 0.030

At epoch 38, batch 251, having loss: 0.030

At epoch 38, batch 301, having loss: 0.029

At epoch 38, batch 351, having loss: 0.028

At epoch 38, batch 401, having loss: 0.029

Epoch: 38, Loss: 0.028, Training Accuracy: 0.990

Validation Accuracy: 0.96, Total items: 1746

At epoch 39, batch 51, having loss: 0.021

At epoch 39, batch 101, having loss: 0.041

At epoch 39, batch 151, having loss: 0.036

At epoch 39, batch 201, having loss: 0.037

At epoch 39, batch 251, having loss: 0.035

At epoch 39, batch 301, having loss: 0.033

At epoch 39, batch 351, having loss: 0.033

At epoch 39, batch 401, having loss: 0.031

Epoch: 39, Loss: 0.032, Training Accuracy: 0.988

Validation Accuracy: 0.96, Total items: 1746

At epoch 40, batch 51, having loss: 0.031

At epoch 40, batch 101, having loss: 0.028

At epoch 40, batch 151, having loss: 0.023

At epoch 40, batch 201, having loss: 0.029

At epoch 40, batch 251, having loss: 0.032

At epoch 40, batch 301, having loss: 0.037

At epoch 40, batch 351, having loss: 0.036

At epoch 40, batch 401, having loss: 0.038

Epoch: 40, Loss: 0.037, Training Accuracy: 0.988

Validation Accuracy: 0.97, Total items: 1746

At epoch 41, batch 51, having loss: 0.023

At epoch 41, batch 101, having loss: 0.025

At epoch 41, batch 151, having loss: 0.022

At epoch 41, batch 201, having loss: 0.025

At epoch 41, batch 251, having loss: 0.026

At epoch 41, batch 301, having loss: 0.026

At epoch 41, batch 351, having loss: 0.025

At epoch 41, batch 401, having loss: 0.025

Epoch: 41, Loss: 0.024, Training Accuracy: 0.991

Validation Accuracy: 0.97, Total items: 1746

At epoch 42, batch 51, having loss: 0.021

At epoch 42, batch 101, having loss: 0.021

At epoch 42, batch 151, having loss: 0.024

At epoch 42, batch 201, having loss: 0.025

At epoch 42, batch 251, having loss: 0.025

At epoch 42, batch 301, having loss: 0.026

At epoch 42, batch 351, having loss: 0.025

At epoch 42, batch 401, having loss: 0.027

Epoch: 42, Loss: 0.027, Training Accuracy: 0.991

Validation Accuracy: 0.96, Total items: 1746

At epoch 43, batch 51, having loss: 0.037

At epoch 43, batch 101, having loss: 0.032

At epoch 43, batch 151, having loss: 0.032

At epoch 43, batch 201, having loss: 0.032

At epoch 43, batch 251, having loss: 0.032

At epoch 43, batch 301, having loss: 0.031

At epoch 43, batch 351, having loss: 0.031

At epoch 43, batch 401, having loss: 0.030

Epoch: 43, Loss: 0.028, Training Accuracy: 0.990

Validation Accuracy: 0.97, Total items: 1746

At epoch 44, batch 51, having loss: 0.018

At epoch 44, batch 101, having loss: 0.017

At epoch 44, batch 151, having loss: 0.016

At epoch 44, batch 201, having loss: 0.017

At epoch 44, batch 251, having loss: 0.019

At epoch 44, batch 301, having loss: 0.017

At epoch 44, batch 351, having loss: 0.016

At epoch 44, batch 401, having loss: 0.015

Epoch: 44, Loss: 0.015, Training Accuracy: 0.994

Validation Accuracy: 0.98, Total items: 1746

At epoch 45, batch 51, having loss: 0.017

At epoch 45, batch 101, having loss: 0.014

At epoch 45, batch 151, having loss: 0.017

At epoch 45, batch 201, having loss: 0.021

At epoch 45, batch 251, having loss: 0.020

At epoch 45, batch 301, having loss: 0.019

At epoch 45, batch 351, having loss: 0.018

At epoch 45, batch 401, having loss: 0.018

Epoch: 45, Loss: 0.019, Training Accuracy: 0.992

Validation Accuracy: 0.98, Total items: 1746

At epoch 46, batch 51, having loss: 0.008

At epoch 46, batch 101, having loss: 0.010

At epoch 46, batch 151, having loss: 0.016

At epoch 46, batch 201, having loss: 0.017

At epoch 46, batch 251, having loss: 0.018

At epoch 46, batch 301, having loss: 0.016

At epoch 46, batch 351, having loss: 0.016

At epoch 46, batch 401, having loss: 0.016

Epoch: 46, Loss: 0.017, Training Accuracy: 0.994

Validation Accuracy: 0.97, Total items: 1746

At epoch 47, batch 51, having loss: 0.006

At epoch 47, batch 101, having loss: 0.007

At epoch 47, batch 151, having loss: 0.011

At epoch 47, batch 201, having loss: 0.015

At epoch 47, batch 251, having loss: 0.015

At epoch 47, batch 301, having loss: 0.015

At epoch 47, batch 351, having loss: 0.015

At epoch 47, batch 401, having loss: 0.014

Epoch: 47, Loss: 0.014, Training Accuracy: 0.996

Validation Accuracy: 0.97, Total items: 1746

At epoch 48, batch 51, having loss: 0.014

At epoch 48, batch 101, having loss: 0.009

At epoch 48, batch 151, having loss: 0.010

At epoch 48, batch 201, having loss: 0.013

At epoch 48, batch 251, having loss: 0.011

At epoch 48, batch 301, having loss: 0.010

At epoch 48, batch 351, having loss: 0.011

At epoch 48, batch 401, having loss: 0.011

Epoch: 48, Loss: 0.010, Training Accuracy: 0.996

Validation Accuracy: 0.98, Total items: 1746

At epoch 49, batch 51, having loss: 0.009

At epoch 49, batch 101, having loss: 0.008

At epoch 49, batch 151, having loss: 0.007

At epoch 49, batch 201, having loss: 0.010

At epoch 49, batch 251, having loss: 0.012

At epoch 49, batch 301, having loss: 0.013

At epoch 49, batch 351, having loss: 0.013

At epoch 49, batch 401, having loss: 0.012

Epoch: 49, Loss: 0.012, Training Accuracy: 0.996

Validation Accuracy: 0.98, Total items: 1746

At epoch 50, batch 51, having loss: 0.006

At epoch 50, batch 101, having loss: 0.008

At epoch 50, batch 151, having loss: 0.010

At epoch 50, batch 201, having loss: 0.008

At epoch 50, batch 251, having loss: 0.009

At epoch 50, batch 301, having loss: 0.010

At epoch 50, batch 351, having loss: 0.009

At epoch 50, batch 401, having loss: 0.008

Epoch: 50, Loss: 0.010, Training Accuracy: 0.997

Validation Accuracy: 0.98, Total items: 1746

Finished Training

The training time is 25434.680 seconds

**Reload the model and train another 30 epochs**

At epoch 1, batch 51, having loss: 0.036

At epoch 1, batch 101, having loss: 0.028

At epoch 1, batch 151, having loss: 0.028

At epoch 1, batch 201, having loss: 0.022

At epoch 1, batch 251, having loss: 0.021

At epoch 1, batch 301, having loss: 0.019

At epoch 1, batch 351, having loss: 0.019

At epoch 1, batch 401, having loss: 0.019

Epoch: 1, Loss: 0.019, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.021170 Total items: 1746

At epoch 2, batch 51, having loss: 0.027

At epoch 2, batch 101, having loss: 0.024

At epoch 2, batch 151, having loss: 0.021

At epoch 2, batch 201, having loss: 0.022

At epoch 2, batch 251, having loss: 0.024

At epoch 2, batch 301, having loss: 0.023

At epoch 2, batch 351, having loss: 0.021

At epoch 2, batch 401, having loss: 0.022

Epoch: 2, Loss: 0.022, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.024840 Total items: 1746

At epoch 3, batch 51, having loss: 0.035

At epoch 3, batch 101, having loss: 0.028

At epoch 3, batch 151, having loss: 0.025

At epoch 3, batch 201, having loss: 0.025

At epoch 3, batch 251, having loss: 0.023

At epoch 3, batch 301, having loss: 0.022

At epoch 3, batch 351, having loss: 0.022

At epoch 3, batch 401, having loss: 0.021

Epoch: 3, Loss: 0.020, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.038230 Total items: 1746

At epoch 4, batch 51, having loss: 0.024

At epoch 4, batch 101, having loss: 0.030

At epoch 4, batch 151, having loss: 0.027

At epoch 4, batch 201, having loss: 0.028

At epoch 4, batch 251, having loss: 0.027

At epoch 4, batch 301, having loss: 0.024

At epoch 4, batch 351, having loss: 0.024

At epoch 4, batch 401, having loss: 0.023

Epoch: 4, Loss: 0.022, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.048949 Total items: 1746

At epoch 5, batch 51, having loss: 0.023

At epoch 5, batch 101, having loss: 0.018

At epoch 5, batch 151, having loss: 0.018

At epoch 5, batch 201, having loss: 0.020

At epoch 5, batch 251, having loss: 0.021

At epoch 5, batch 301, having loss: 0.026

At epoch 5, batch 351, having loss: 0.024

At epoch 5, batch 401, having loss: 0.024

Epoch: 5, Loss: 0.025, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.030654 Total items: 1746

At epoch 6, batch 51, having loss: 0.028

At epoch 6, batch 101, having loss: 0.026

At epoch 6, batch 151, having loss: 0.023

At epoch 6, batch 201, having loss: 0.023

At epoch 6, batch 251, having loss: 0.024

At epoch 6, batch 301, having loss: 0.023

At epoch 6, batch 351, having loss: 0.025

At epoch 6, batch 401, having loss: 0.023

Epoch: 6, Loss: 0.022, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.030362 Total items: 1746

At epoch 7, batch 51, having loss: 0.040

At epoch 7, batch 101, having loss: 0.033

At epoch 7, batch 151, having loss: 0.024

At epoch 7, batch 201, having loss: 0.029

At epoch 7, batch 251, having loss: 0.026

At epoch 7, batch 301, having loss: 0.026

At epoch 7, batch 351, having loss: 0.023

At epoch 7, batch 401, having loss: 0.025

Epoch: 7, Loss: 0.024, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.024227 Total items: 1746

At epoch 8, batch 51, having loss: 0.023

At epoch 8, batch 101, having loss: 0.032

At epoch 8, batch 151, having loss: 0.032

At epoch 8, batch 201, having loss: 0.032

At epoch 8, batch 251, having loss: 0.031

At epoch 8, batch 301, having loss: 0.029

At epoch 8, batch 351, having loss: 0.028

At epoch 8, batch 401, having loss: 0.029

Epoch: 8, Loss: 0.027, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.021816 Total items: 1746

At epoch 9, batch 51, having loss: 0.020

At epoch 9, batch 101, having loss: 0.030

At epoch 9, batch 151, having loss: 0.028

At epoch 9, batch 201, having loss: 0.027

At epoch 9, batch 251, having loss: 0.028

At epoch 9, batch 301, having loss: 0.026

At epoch 9, batch 351, having loss: 0.024

At epoch 9, batch 401, having loss: 0.024

Epoch: 9, Loss: 0.025, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.039611 Total items: 1746

At epoch 10, batch 51, having loss: 0.023

At epoch 10, batch 101, having loss: 0.019

At epoch 10, batch 151, having loss: 0.020

At epoch 10, batch 201, having loss: 0.026

At epoch 10, batch 251, having loss: 0.029

At epoch 10, batch 301, having loss: 0.027

At epoch 10, batch 351, having loss: 0.026

At epoch 10, batch 401, having loss: 0.024

Epoch: 10, Loss: 0.024, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.028018 Total items: 1746

At epoch 11, batch 51, having loss: 0.020

At epoch 11, batch 101, having loss: 0.017

At epoch 11, batch 151, having loss: 0.016

At epoch 11, batch 201, having loss: 0.019

At epoch 11, batch 251, having loss: 0.019

At epoch 11, batch 301, having loss: 0.024

At epoch 11, batch 351, having loss: 0.024

At epoch 11, batch 401, having loss: 0.024

Epoch: 11, Loss: 0.024, Training Accuracy: 0.991

Validation Accuracy: 0.99, Validation Loss: 0.025096 Total items: 1746

At epoch 12, batch 51, having loss: 0.036

At epoch 12, batch 101, having loss: 0.035

At epoch 12, batch 151, having loss: 0.028

At epoch 12, batch 201, having loss: 0.023

At epoch 12, batch 251, having loss: 0.023

At epoch 12, batch 301, having loss: 0.023

At epoch 12, batch 351, having loss: 0.023

At epoch 12, batch 401, having loss: 0.023

Epoch: 12, Loss: 0.023, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.025271 Total items: 1746

At epoch 13, batch 51, having loss: 0.032

At epoch 13, batch 101, having loss: 0.027

At epoch 13, batch 151, having loss: 0.027

At epoch 13, batch 201, having loss: 0.024

At epoch 13, batch 251, having loss: 0.023

At epoch 13, batch 301, having loss: 0.022

At epoch 13, batch 351, having loss: 0.022

At epoch 13, batch 401, having loss: 0.023

Epoch: 13, Loss: 0.023, Training Accuracy: 0.991

Validation Accuracy: 0.99, Validation Loss: 0.038466 Total items: 1746

At epoch 14, batch 51, having loss: 0.021

At epoch 14, batch 101, having loss: 0.022

At epoch 14, batch 151, having loss: 0.021

At epoch 14, batch 201, having loss: 0.020

At epoch 14, batch 251, having loss: 0.022

At epoch 14, batch 301, having loss: 0.023

At epoch 14, batch 351, having loss: 0.023

At epoch 14, batch 401, having loss: 0.027

Epoch: 14, Loss: 0.026, Training Accuracy: 0.991

Validation Accuracy: 0.99, Validation Loss: 0.025798 Total items: 1746

At epoch 15, batch 51, having loss: 0.024

At epoch 15, batch 101, having loss: 0.023

At epoch 15, batch 151, having loss: 0.026

At epoch 15, batch 201, having loss: 0.027

At epoch 15, batch 251, having loss: 0.024

At epoch 15, batch 301, having loss: 0.025

At epoch 15, batch 351, having loss: 0.024

At epoch 15, batch 401, having loss: 0.024

Epoch: 15, Loss: 0.025, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.031636 Total items: 1746

At epoch 16, batch 51, having loss: 0.012

At epoch 16, batch 101, having loss: 0.017

At epoch 16, batch 151, having loss: 0.022

At epoch 16, batch 201, having loss: 0.020

At epoch 16, batch 251, having loss: 0.022

At epoch 16, batch 301, having loss: 0.021

At epoch 16, batch 351, having loss: 0.022

At epoch 16, batch 401, having loss: 0.023

Epoch: 16, Loss: 0.024, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.046393 Total items: 1746

At epoch 17, batch 51, having loss: 0.011

At epoch 17, batch 101, having loss: 0.021

At epoch 17, batch 151, having loss: 0.019

At epoch 17, batch 201, having loss: 0.020

At epoch 17, batch 251, having loss: 0.020

At epoch 17, batch 301, having loss: 0.019

At epoch 17, batch 351, having loss: 0.019

At epoch 17, batch 401, having loss: 0.019

Epoch: 17, Loss: 0.019, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.025862 Total items: 1746

At epoch 18, batch 51, having loss: 0.014

At epoch 18, batch 101, having loss: 0.022

At epoch 18, batch 151, having loss: 0.020

At epoch 18, batch 201, having loss: 0.021

At epoch 18, batch 251, having loss: 0.021

At epoch 18, batch 301, having loss: 0.019

At epoch 18, batch 351, having loss: 0.020

At epoch 18, batch 401, having loss: 0.019

Epoch: 18, Loss: 0.019, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.025567 Total items: 1746

At epoch 19, batch 51, having loss: 0.040

At epoch 19, batch 101, having loss: 0.031

At epoch 19, batch 151, having loss: 0.027

At epoch 19, batch 201, having loss: 0.022

At epoch 19, batch 251, having loss: 0.019

At epoch 19, batch 301, having loss: 0.021

At epoch 19, batch 351, having loss: 0.023

At epoch 19, batch 401, having loss: 0.022

Epoch: 19, Loss: 0.021, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.030575 Total items: 1746

At epoch 20, batch 51, having loss: 0.016

At epoch 20, batch 101, having loss: 0.018

At epoch 20, batch 151, having loss: 0.022

At epoch 20, batch 201, having loss: 0.019

At epoch 20, batch 251, having loss: 0.019

At epoch 20, batch 301, having loss: 0.017

At epoch 20, batch 351, having loss: 0.016

At epoch 20, batch 401, having loss: 0.018

Epoch: 20, Loss: 0.017, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.024694 Total items: 1746

At epoch 21, batch 51, having loss: 0.026

At epoch 21, batch 101, having loss: 0.016

At epoch 21, batch 151, having loss: 0.017

At epoch 21, batch 201, having loss: 0.019

At epoch 21, batch 251, having loss: 0.019

At epoch 21, batch 301, having loss: 0.020

At epoch 21, batch 351, having loss: 0.024

At epoch 21, batch 401, having loss: 0.025

Epoch: 21, Loss: 0.024, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.029158 Total items: 1746

At epoch 22, batch 51, having loss: 0.018

At epoch 22, batch 101, having loss: 0.018

At epoch 22, batch 151, having loss: 0.020

At epoch 22, batch 201, having loss: 0.019

At epoch 22, batch 251, having loss: 0.019

At epoch 22, batch 301, having loss: 0.019

At epoch 22, batch 351, having loss: 0.020

At epoch 22, batch 401, having loss: 0.020

Epoch: 22, Loss: 0.020, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.031062 Total items: 1746

At epoch 23, batch 51, having loss: 0.021

At epoch 23, batch 101, having loss: 0.017

At epoch 23, batch 151, having loss: 0.023

At epoch 23, batch 201, having loss: 0.021

At epoch 23, batch 251, having loss: 0.021

At epoch 23, batch 301, having loss: 0.022

At epoch 23, batch 351, having loss: 0.024

At epoch 23, batch 401, having loss: 0.024

Epoch: 23, Loss: 0.024, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.032305 Total items: 1746

At epoch 24, batch 51, having loss: 0.025

At epoch 24, batch 101, having loss: 0.021

At epoch 24, batch 151, having loss: 0.024

At epoch 24, batch 201, having loss: 0.020

At epoch 24, batch 251, having loss: 0.019

At epoch 24, batch 301, having loss: 0.022

At epoch 24, batch 351, having loss: 0.021

At epoch 24, batch 401, having loss: 0.019

Epoch: 24, Loss: 0.020, Training Accuracy: 0.992

Validation Accuracy: 0.99, Validation Loss: 0.021245 Total items: 1746

At epoch 25, batch 51, having loss: 0.014

At epoch 25, batch 101, having loss: 0.017

At epoch 25, batch 151, having loss: 0.018

At epoch 25, batch 201, having loss: 0.018

At epoch 25, batch 251, having loss: 0.018

At epoch 25, batch 301, having loss: 0.018

At epoch 25, batch 351, having loss: 0.018

At epoch 25, batch 401, having loss: 0.017

Epoch: 25, Loss: 0.017, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.021753 Total items: 1746

At epoch 26, batch 51, having loss: 0.013

At epoch 26, batch 101, having loss: 0.016

At epoch 26, batch 151, having loss: 0.016

At epoch 26, batch 201, having loss: 0.016

At epoch 26, batch 251, having loss: 0.016

At epoch 26, batch 301, having loss: 0.016

At epoch 26, batch 351, having loss: 0.017

At epoch 26, batch 401, having loss: 0.017

Epoch: 26, Loss: 0.017, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.026824 Total items: 1746

At epoch 27, batch 51, having loss: 0.022

At epoch 27, batch 101, having loss: 0.018

At epoch 27, batch 151, having loss: 0.022

At epoch 27, batch 201, having loss: 0.021

At epoch 27, batch 251, having loss: 0.019

At epoch 27, batch 301, having loss: 0.021

At epoch 27, batch 351, having loss: 0.020

At epoch 27, batch 401, having loss: 0.020

Epoch: 27, Loss: 0.020, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.023578 Total items: 1746

At epoch 28, batch 51, having loss: 0.029

At epoch 28, batch 101, having loss: 0.022

At epoch 28, batch 151, having loss: 0.022

At epoch 28, batch 201, having loss: 0.022

At epoch 28, batch 251, having loss: 0.019

At epoch 28, batch 301, having loss: 0.021

At epoch 28, batch 351, having loss: 0.019

At epoch 28, batch 401, having loss: 0.018

Epoch: 28, Loss: 0.020, Training Accuracy: 0.993

Validation Accuracy: 0.99, Validation Loss: 0.015463 Total items: 1746

At epoch 29, batch 51, having loss: 0.022

At epoch 29, batch 101, having loss: 0.020

At epoch 29, batch 151, having loss: 0.016

At epoch 29, batch 201, having loss: 0.015

At epoch 29, batch 251, having loss: 0.014

At epoch 29, batch 301, having loss: 0.014

At epoch 29, batch 351, having loss: 0.014

At epoch 29, batch 401, having loss: 0.016

Epoch: 29, Loss: 0.016, Training Accuracy: 0.994

Validation Accuracy: 0.99, Validation Loss: 0.023108 Total items: 1746

At epoch 30, batch 51, having loss: 0.007

At epoch 30, batch 101, having loss: 0.012

At epoch 30, batch 151, having loss: 0.012

At epoch 30, batch 201, having loss: 0.012

At epoch 30, batch 251, having loss: 0.016

At epoch 30, batch 301, having loss: 0.017

At epoch 30, batch 351, having loss: 0.017

At epoch 30, batch 401, having loss: 0.016

Epoch: 30, Loss: 0.017, Training Accuracy: 0.995

Validation Accuracy: 0.99, Validation Loss: 0.018910 Total items: 1746

Finished Training

The training time is 30133.944 seconds