Part3 Results

Perceptron

perceptron with n = 100

0.8016

perceptron with n = 500

0.6478

perceptron with n = 1000

0.6754

bestresult: correct1 = 0.8016 m = 100

Perceptron with margin

perceptron\_margin with m = 100, r = 1.5

0.8016

perceptron\_margin with m = 100, r = 0.25

0.7958

perceptron\_margin with m = 100, r = 0.03

0.8224

perceptron\_margin with m = 100, r = 0.005

0.7634

perceptron\_margin with m = 100, r = 0.001

0.6798

bestresult for m = 100 : correct1 = 0.8224 learning rate = 0.03

perceptron\_margin with m = 500, r = 1.5

0.6478

perceptron\_margin with m = 500, r = 0.25

0.6574

perceptron\_margin with m = 500, r = 0.03

0.6454

perceptron\_margin with m = 500, r = 0.005

0.628

perceptron\_margin with m = 500, r = 0.001

0.5588

bestresult for m = 500 : correct1 = 0.6574 learning rate = 0.25

perceptron\_margin with m = 1000, r = 1.5

0.6754

perceptron\_margin with m = 1000, r = 0.25

0.7168

perceptron\_margin with m = 1000, r = 0.03

0.7228

perceptron\_margin with m = 1000, r = 0.005

0.6272

perceptron\_margin with m = 1000, r = 0.001

0.56

bestresult for m = 1000 : correct1 = 0.7228 learning rate = 0.03

Winnow:

winnow with m = 100, alpha = 1.1

0.7784

winnow with m = 100, alpha = 1.01

0.819

winnow with m = 100, alpha = 1.005

0.7466

winnow with m = 100, alpha = 1.0005

0.5982

winnow with m = 100, alpha = 1.0001

0.5832

bestresult m = 100: correct1 = 0.819 alpha = 1.01

winnow with m = 500, alpha = 1.1

0.7978

winnow with m = 500, alpha = 1.01

0.545

winnow with m = 500, alpha = 1.005

0.5294

winnow with m = 500, alpha = 1.0005

0.5248

winnow with m = 500, alpha = 1.0001

0.5188

bestresult m = 500: correct1 = 0.7978 alpha = 1.1

winnow with m = 1000, alpha = 1.1

0.7406

winnow with m = 1000, alpha = 1.01

0.654

winnow with m = 1000, alpha = 1.005

0.4932

winnow with m = 1000, alpha = 1.0005

0.4932

winnow with m = 1000, alpha = 1.0001

0.4932

bestresult m = 1000: correct1 = 0.7406 alpha = 1.1

Winnow with margin:

winnow\_margin with m = 100, alpha = 1.1 gamma = 2.0

0.8916

winnow\_margin with m = 100, alpha = 1.1 gamma = 0.3

0.8808

winnow\_margin with m = 100, alpha = 1.1 gamma = 0.04

0.8756

winnow\_margin with m = 100, alpha = 1.1 gamma = 0.006

0.8414

winnow\_margin with m = 100, alpha = 1.1 gamma = 0.001

0.8908

winnow\_margin with m = 100, alpha = 1.01 gamma = 2.0

0.9002

winnow\_margin with m = 100, alpha = 1.01 gamma = 0.3

0.8334

winnow\_margin with m = 100, alpha = 1.01 gamma = 0.04

0.8208

winnow\_margin with m = 100, alpha = 1.01 gamma = 0.006

0.8188

winnow\_margin with m = 100, alpha = 1.01 gamma = 0.001

0.8184

winnow\_margin with m = 100, alpha = 1.005 gamma = 2.0

0.8648

winnow\_margin with m = 100, alpha = 1.005 gamma = 0.3

0.7606

winnow\_margin with m = 100, alpha = 1.005 gamma = 0.04

0.7486

winnow\_margin with m = 100, alpha = 1.005 gamma = 0.006

0.7462

winnow\_margin with m = 100, alpha = 1.005 gamma = 0.001

0.7464

winnow\_margin with m = 100, alpha = 1.0005 gamma = 2.0

0.609

winnow\_margin with m = 100, alpha = 1.0005 gamma = 0.3

0.6

winnow\_margin with m = 100, alpha = 1.0005 gamma = 0.04

0.5984

winnow\_margin with m = 100, alpha = 1.0005 gamma = 0.006

0.5982

winnow\_margin with m = 100, alpha = 1.0005 gamma = 0.001

0.5984

winnow\_margin with m = 100, alpha = 1.0001 gamma = 2.0

0.5854

winnow\_margin with m = 100, alpha = 1.0001 gamma = 0.3

0.5822

winnow\_margin with m = 100, alpha = 1.0001 gamma = 0.04

0.5828

winnow\_margin with m = 100, alpha = 1.0001 gamma = 0.006

0.583

winnow\_margin with m = 100, alpha = 1.0001 gamma = 0.001

0.583

bestresult for m = 100: correct1 = 0.9002 alpha = 1.01 gamma = 2.0

winnow\_margin with m = 500, alpha = 1.1 gamma = 2.0

0.7996

winnow\_margin with m = 500, alpha = 1.1 gamma = 0.3

0.7912

winnow\_margin with m = 500, alpha = 1.1 gamma = 0.04

0.7986

winnow\_margin with m = 500, alpha = 1.1 gamma = 0.006

0.803

winnow\_margin with m = 500, alpha = 1.1 gamma = 0.001

0.7938

winnow\_margin with m = 500, alpha = 1.01 gamma = 2.0

0.551

winnow\_margin with m = 500, alpha = 1.01 gamma = 0.3

0.5492

winnow\_margin with m = 500, alpha = 1.01 gamma = 0.04

0.5478

winnow\_margin with m = 500, alpha = 1.01 gamma = 0.006

0.5448

winnow\_margin with m = 500, alpha = 1.01 gamma = 0.001

0.5464

winnow\_margin with m = 500, alpha = 1.005 gamma = 2.0

0.5308

winnow\_margin with m = 500, alpha = 1.005 gamma = 0.3

0.5292

winnow\_margin with m = 500, alpha = 1.005 gamma = 0.04

0.5294

winnow\_margin with m = 500, alpha = 1.005 gamma = 0.006

0.529

winnow\_margin with m = 500, alpha = 1.005 gamma = 0.001

0.5304

winnow\_margin with m = 500, alpha = 1.0005 gamma = 2.0

0.5202

winnow\_margin with m = 500, alpha = 1.0005 gamma = 0.3

0.525

winnow\_margin with m = 500, alpha = 1.0005 gamma = 0.04

0.5244

winnow\_margin with m = 500, alpha = 1.0005 gamma = 0.006

0.525

winnow\_margin with m = 500, alpha = 1.0005 gamma = 0.001

0.5246

winnow\_margin with m = 500, alpha = 1.0001 gamma = 2.0

0.5182

winnow\_margin with m = 500, alpha = 1.0001 gamma = 0.3

0.5186

winnow\_margin with m = 500, alpha = 1.0001 gamma = 0.04

0.5186

winnow\_margin with m = 500, alpha = 1.0001 gamma = 0.006

0.5188

winnow\_margin with m = 500, alpha = 1.0001 gamma = 0.001

0.5188

bestresult for m = 500: correct1 = 0.803 alpha = 1.1 gamma = 0.006

winnow\_margin with m = 1000, alpha = 1.1 gamma = 2.0

0.738

winnow\_margin with m = 1000, alpha = 1.1 gamma = 0.3

0.7398

winnow\_margin with m = 1000, alpha = 1.1 gamma = 0.04

0.7394

winnow\_margin with m = 1000, alpha = 1.1 gamma = 0.006

0.739

winnow\_margin with m = 1000, alpha = 1.1 gamma = 0.001

0.7406

winnow\_margin with m = 1000, alpha = 1.01 gamma = 2.0

0.6542

winnow\_margin with m = 1000, alpha = 1.01 gamma = 0.3

0.6548

winnow\_margin with m = 1000, alpha = 1.01 gamma = 0.04

0.6544

winnow\_margin with m = 1000, alpha = 1.01 gamma = 0.006

0.654

winnow\_margin with m = 1000, alpha = 1.01 gamma = 0.001

0.654

winnow\_margin with m = 1000, alpha = 1.005 gamma = 2.0

0.4932

winnow\_margin with m = 1000, alpha = 1.005 gamma = 0.3

0.4932

winnow\_margin with m = 1000, alpha = 1.005 gamma = 0.04

0.4932

winnow\_margin with m = 1000, alpha = 1.005 gamma = 0.006

0.4932

winnow\_margin with m = 1000, alpha = 1.005 gamma = 0.001

0.4932

winnow\_margin with m = 1000, alpha = 1.0005 gamma = 2.0

0.4932

winnow\_margin with m = 1000, alpha = 1.0005 gamma = 0.3

0.4932

winnow\_margin with m = 1000, alpha = 1.0005 gamma = 0.04

0.4932

winnow\_margin with m = 1000, alpha = 1.0005 gamma = 0.006

0.4932

winnow\_margin with m = 1000, alpha = 1.0005 gamma = 0.001

0.4932

winnow\_margin with m = 1000, alpha = 1.0001 gamma = 2.0

0.4932

winnow\_margin with m = 1000, alpha = 1.0001 gamma = 0.3

0.4932

winnow\_margin with m = 1000, alpha = 1.0001 gamma = 0.04

0.4932

winnow\_margin with m = 1000, alpha = 1.0001 gamma = 0.006

0.4932

winnow\_margin with m = 1000, alpha = 1.0001 gamma = 0.001

0.4932

bestresult for m = 1000: correct1 = 0.7406 alpha = 1.1 gamma = 0.001

Adagrad

adagrad with m = 100, r = 1.5

0.8482

adagrad with m = 100, r = 0.25

0.8884

adagrad with m = 100, r = 0.03

0.666

adagrad with m = 100, r = 0.005

0.565

adagrad with m = 100, r = 0.001

0.5024

bestresult for m = 100: correct1 = 0.8884 learning rate = 0.25

adagrad with m = 500, r = 1.5

0.7664

adagrad with m = 500, r = 0.25

0.7568

adagrad with m = 500, r = 0.03

0.5936

adagrad with m = 500, r = 0.005

0.544

adagrad with m = 500, r = 0.001

0.5014

bestresult for m = 500: correct1 = 0.7664 learning rate = 1.5

adagrad with m = 1000, r = 1.5

0.7394

adagrad with m = 1000, r = 0.25

0.6508

adagrad with m = 1000, r = 0.03

0.5472

adagrad with m = 1000, r = 0.005

0.5066

adagrad with m = 1000, r = 0.001

0.5066

bestresult for m = 1000: correct1 = 0.7394 learning rate = 1.5

TESTs

Perceptron:

TEST perceptron with m = 100

0.966

TEST perceptron with m = 500

0.9175

TEST perceptron with m = 1000

0.7278

Perceptron with margin:

TEST perceptron\_margin with m = 100, learning rate = 0.005

0.9935

TEST perceptron\_margin with m = 500, learning rate = 0.03

0.9488

TEST perceptron\_margin with m = 1000, learning rate = 0.25

0.7843

Winnow

TESTwinnow with m = 100, alpha = 1.01

0.9667

TESTwinnow with m = 500, alpha = 1.1

0.911

TESTwinnow with m = 1000, alpha = 1.1

0.7695

Winnow with margin:

TEST winnow\_margin with m = 100, alpha = 1.01 gamma = 2.0

0.998

TEST winnow\_margin with m = 500, alpha = 1.1 gamma = 0.006

0.9088

TEST winnow\_margin with m = 1000, alpha = 1.1 gamma = 0.001

0.7579

Adagrad:

TEST adagrad with m = 100, r = 0.25

0.9996

TEST adagrad with m = 100, r = 1.5

0.937

TEST adagrad with m = 100, r = 1.5

0.7767