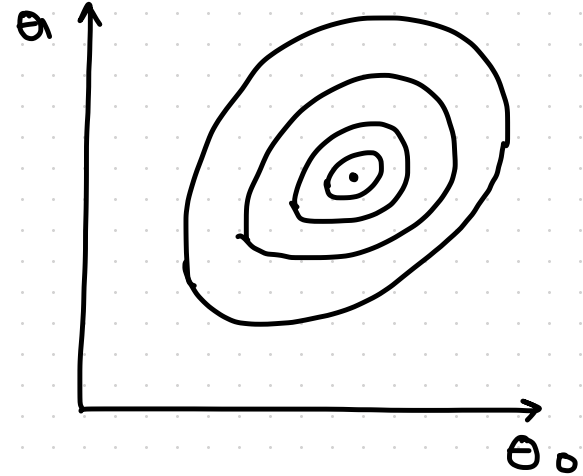
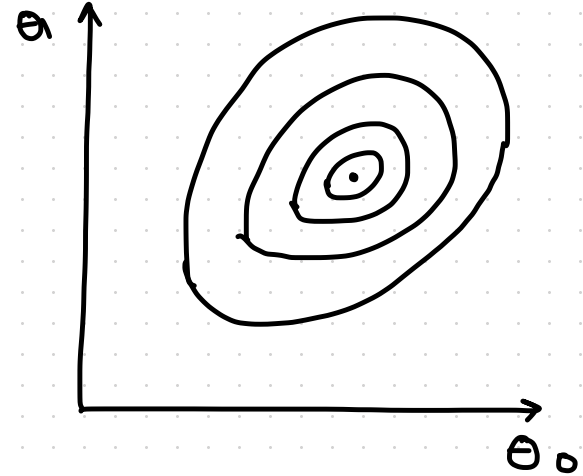


# COORDINATE DESCENT ALGORITHM



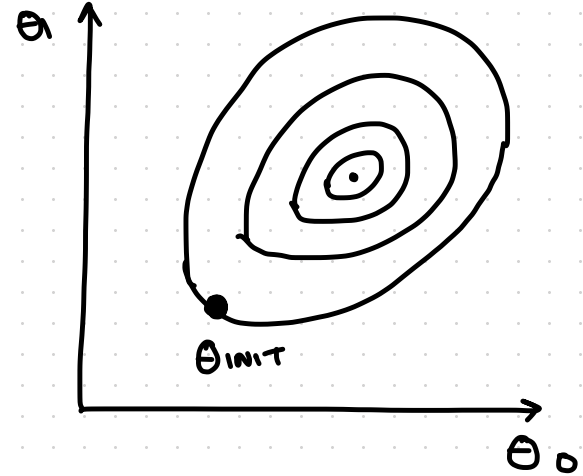
# COORDINATE DESCENT ALGORITHM

GOAL :  $\min_{\theta} f(\theta)$



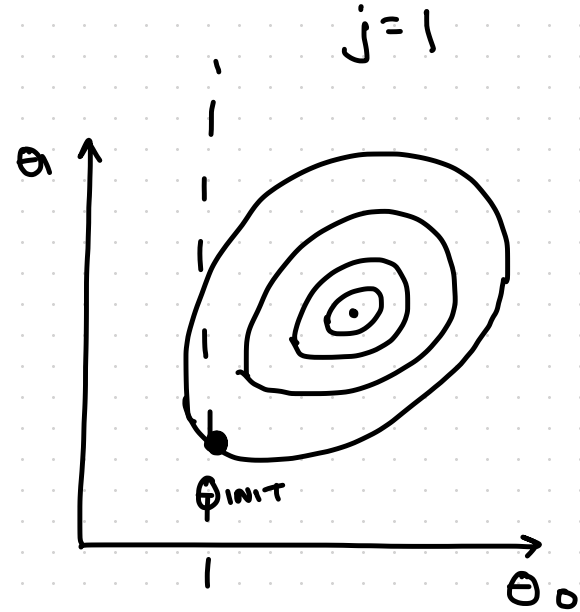
# COORDINATE DESCENT ALGORITHM

1) INIT  $\theta$



# COORDINATE DESCENT ALGORITHM

- 1) INIT  $\theta$
- 2) WHILE NOT CONVERGED
  - 2.1) PICK COORDINATE 'j'



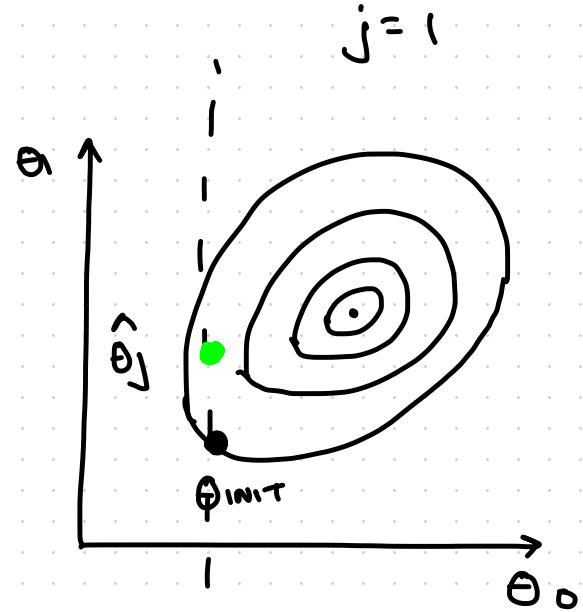
# COORDINATE DESCENT ALGORITHM

1) INIT  $\theta$

2) WHILE NOT CONVERGED

2.1) PICK COORDINATE 'j'

2.2)  $\hat{\theta}_j = \min_{\phi} f(\theta_0, \phi)$



# COORDINATE DESCENT ALGORITHM

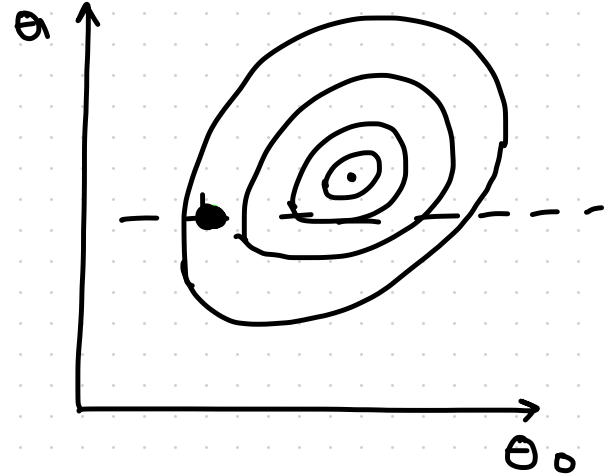
$j = 0$

1) INIT  $\theta$

2) WHILE NOT CONVERGED

✓ 2.1) PICK COORDINATE 'j'

$$2.2) \hat{\theta}_j = \min_{\phi} f(\phi, \theta)$$



# COORDINATE DESCENT ALGORITHM

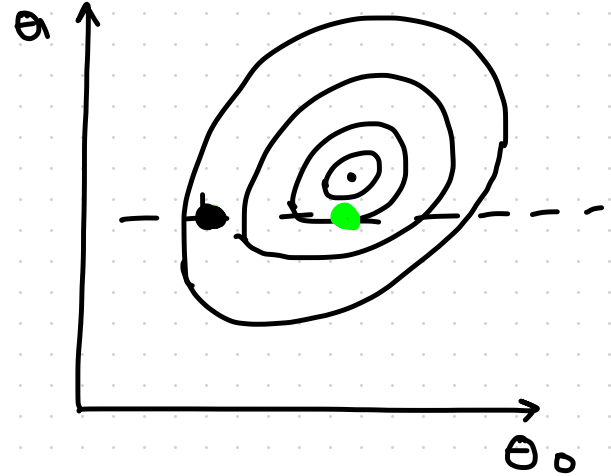
$j = 0$

1) INIT  $\theta$

2) WHILE NOT CONVERGED

2.1) PICK COORDINATE 'j'

✓ 2.2)  $\hat{\theta}_j = \min_{\phi} f(\theta_0, \phi)$



# COORDINATE DESCENT ALGORITHM

$j = 0$

1) INIT  $\theta$

2) WHILE NOT CONVERGED

2.1) PICK COORDINATE 'j'

$$2.2) \hat{\theta}_j = \min_{\phi} f(\theta_0, \phi)$$

