

Gradient Descent

1. Start with an initial guess for θ , call it $\theta^{(0)}$, step-size η .
2. For every $i \geq 0$, do:

- Find gradient $\nabla f(\theta^{(i)})$
- If $\nabla f(\theta^{(i)})$ is "close enough" to the zero vector stop and return final $\theta^{(i)}$ as approximate θ^* .
- Else, set $\theta^{(i+1)} \leftarrow \theta^{(i)} - \eta \nabla f(\theta^{(i)})$ and repeat.

