EECS 16B CSM

Bryan Ngo

UC Berkeley

2021-11-29

Logistics

EECS 16B CSM

- Last CSM Section!
- Fill out feedback form

Newton's Method

EECS 16B CSM

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)} \tag{1}$$

- used to approximate zeroes of differentiable functions
- GIF of NM in action

Quadratic Approximation

EECS 16B CSM

- adding a second-order term to our Approximation
- analog of Jacobian: Hessian

Given $f(x_1, x_2, \ldots)$,

$$H_{ij} = \frac{\partial f}{\partial x_i \partial x_j} \tag{2}$$

Ask Me Anything!

EECS 16B CSM

- Review past finals/midterms
- Topic reviews
- Anything!