

## HW 5 ESM

①.  $f(x, y, z) = \cos^2(xy) + e^{-z} + y^4 z^2$

$$f_x = -2y \sin(xy) \cos(xy)$$

$$f_y = -2x \sin(xy) \cos(xy) + 4y^3 z^2$$

$$f_z = -e^{-z} + 2y^4 z$$

$$f_{zy} = 8y^3 z$$

$$f_{xx} = -2y^2 \cos(2xy)$$

- ③. 1. Github is open-access (democratizes science).  
2. You can compare iterations of code side by side.  
3. It's an easy way to showcase your abilities to employers.