UPGRADE YOUR ENVIRONMENT

PYTHON FOR MATLAB USERS

C4dynamics

MATLAB

x * y

dot product (default)

x .* y

elementwise

PYTHON \ NUMPY

x * y

elementwise (default)

x @ y

dot product

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PYTHON \ NUMPY

x * y

elementwise (default)

x @ y

dot product

Notice the difference in the default behaviors

EXAMPLE

Numpy arrays

```
x = [2, 3, 4]      y = [[1, 1, 1],
                        [1, 1, 1],
                        [1, 1, 1]]
```

```
x @ y = [9, 9, 9]
```
Dot product

```
x * y = [[2, 3, 4],
         [2, 3, 4],
         [2, 3, 4]]
```
Elementwise

More Numpy stuff for Matlab users

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MATRIX GENERATION

Matlab	Numpy
zeros(2, 3)	np.zeros((2, 3))
ones(2, 3)	np.ones((2, 3))
rand(2, 3)	np.random .rand(2, 3)

INDEXING

	Matlab	Numpy
Access element	a(1, 2)	a[0, 1]
Last 5 rows	a(end – 4 : end, :)	a[-5:, :]
Logical indexing	a([true, false, true])	a[[True, False, True]]

COMPLETE GUIDES

NumPy_for_Matlab_Users

sourceforge/matlab-numpy

- Start by simple operations you know well
- Master them
- Learn more

-take it as a rule for life

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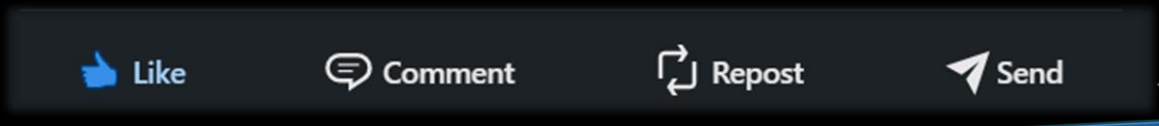


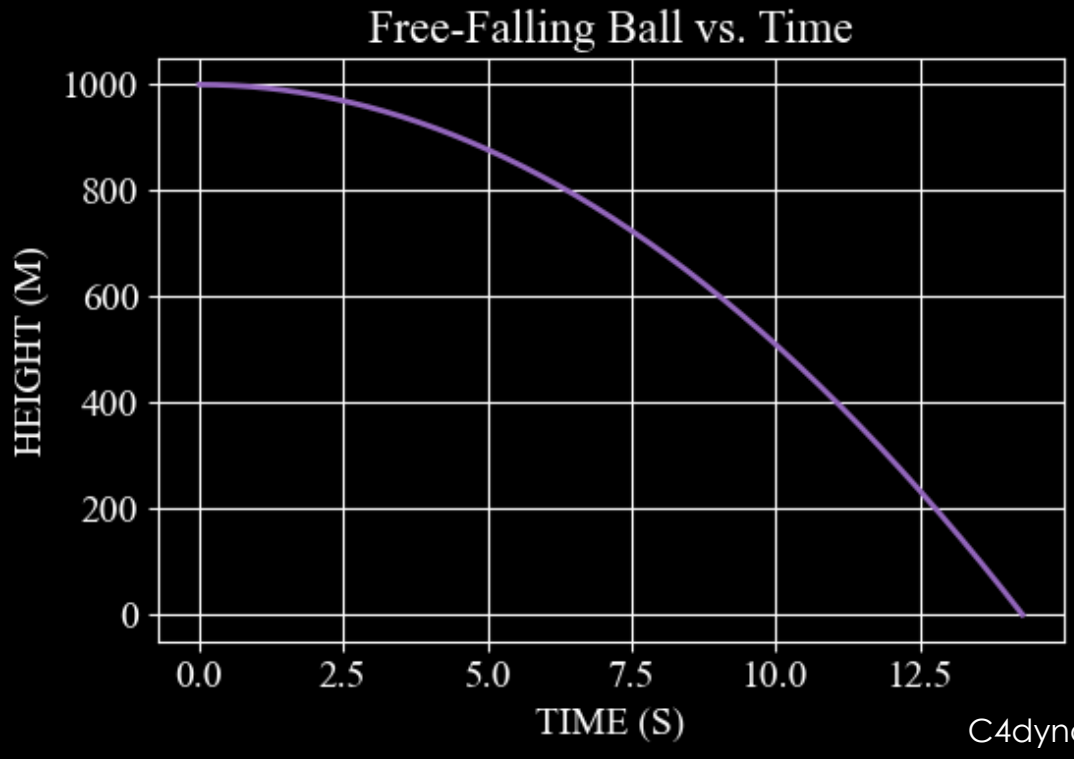
C4dynamics

Pythonic framework for algorithms engineering

Download C4dynamics and run freefall.py

Follow the instructions there:

https://github.com/C4dynamics/C4dynamics/blob/main/examples/freefall.py



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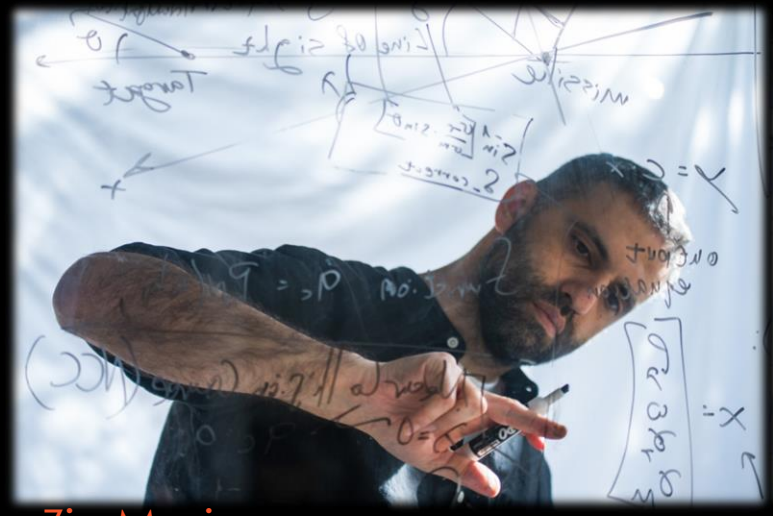
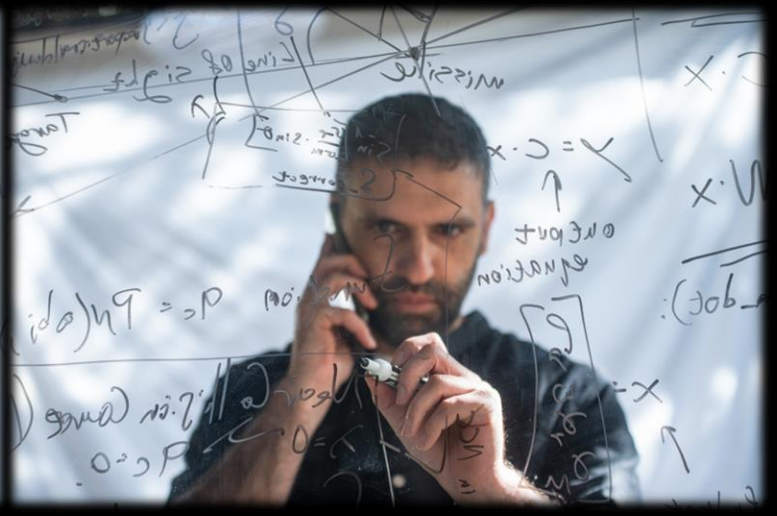
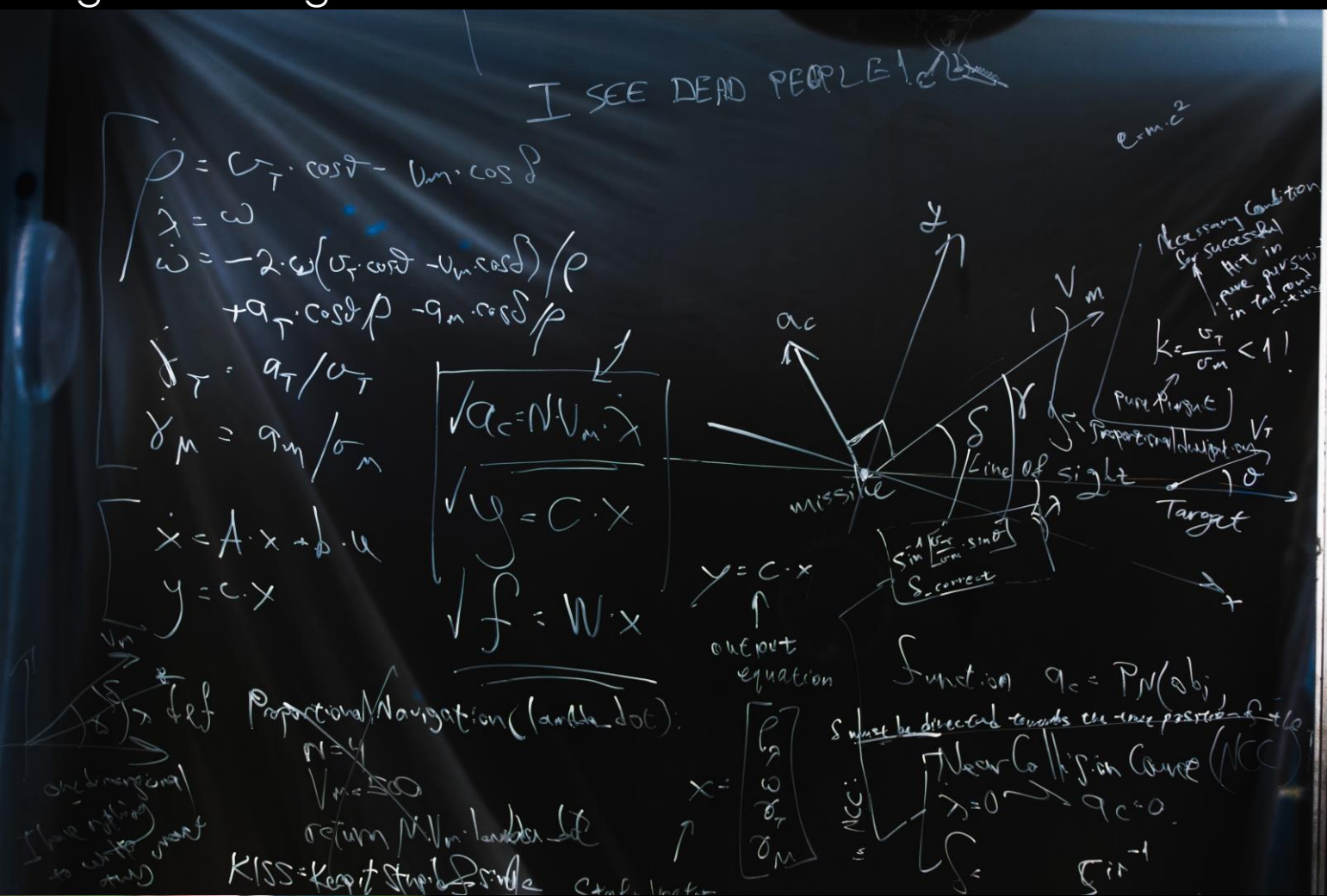




Ziv Meri

Algorithms Engineer



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