

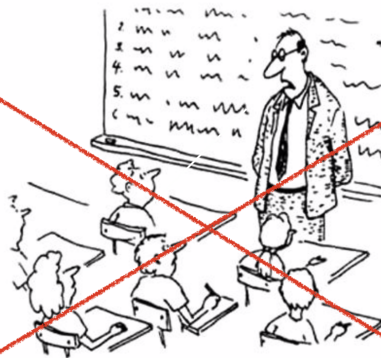
Teaching

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Teaching Philosophy



"I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!"

Teacher, Professor?

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I am an educational rockstar

“Intellectually entertain students and make them learn”

“Don’t try to teach, try to make the students learn”

“Try to figure things out along with the students”

- Spend the first lecture on motivation
- Why, What and How?
- Numerical Linear Algebra
 - The \$25,000,000,000 Eigenvector: Linear algebra behind google
 - The Smart Money's on Numerical Analysts

Adopt latest technologies in teaching



- Jupyter
- AutoGradr
- JPlag

Example: Finite Precision Computation

Solving recurrence

$$a_{n+1} = 10a_n - 9a_{n-1}$$

with $a_0 = a_1 = 2.95$

Interpolate/Approximate

$$f(x) = \frac{1}{1 + 25x^2}$$

Weierstrass approximation theorem

MonteCarlo to compute π

$1/\sqrt{N}$ convergence of MonteCarlo methods

To heighten the understanding of concepts

- Live computational and mathematical demonstrations
- Proofs and more importantly examples/counterexamples

Enables students to understand the details as well as to get the bird's eye view of the entire landscape Students get confidence to see that programming can be simple and fun to play around.