APS106

UNIVERSITY OF TORONTO

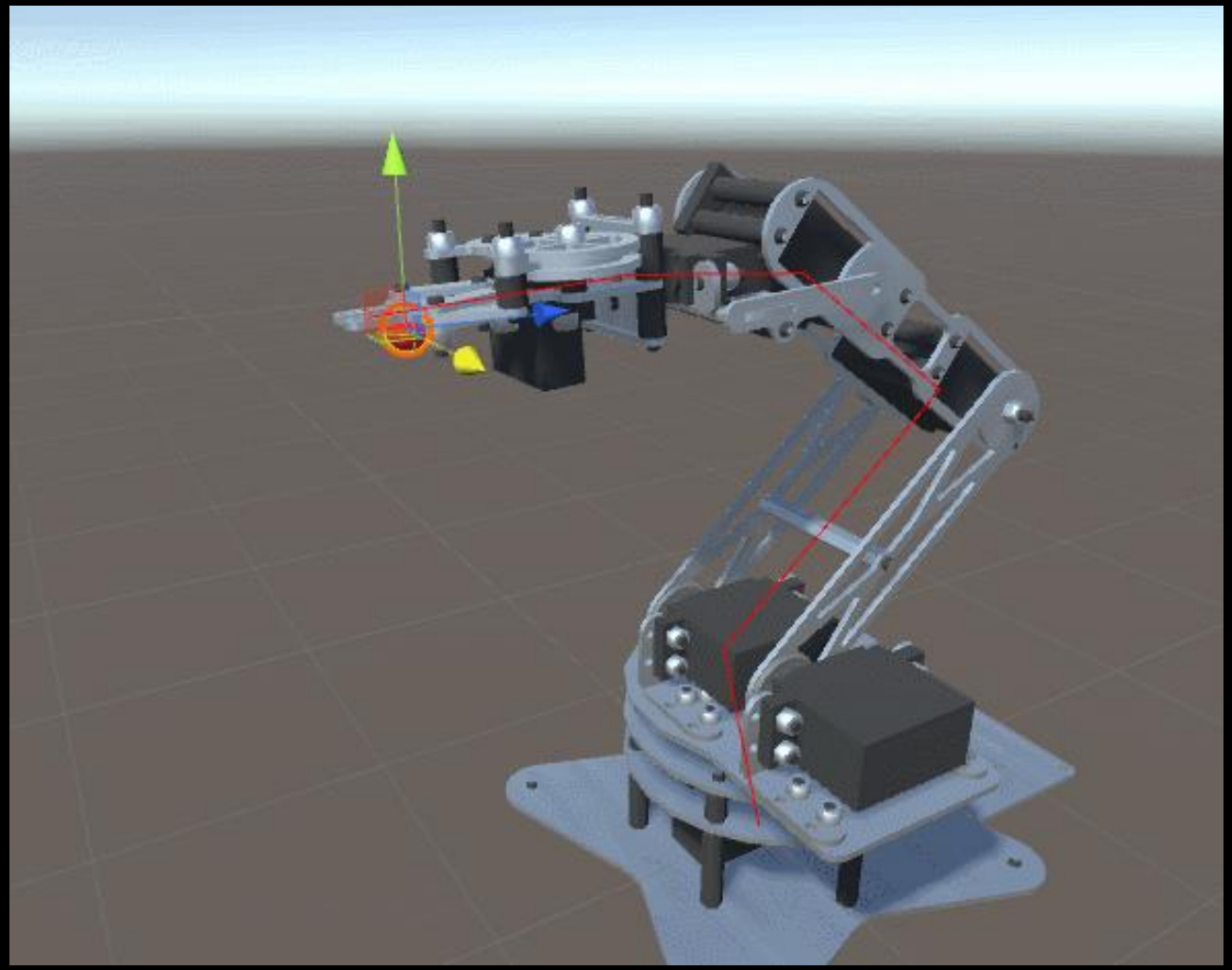
Forward Kinematics

Design Problem 1

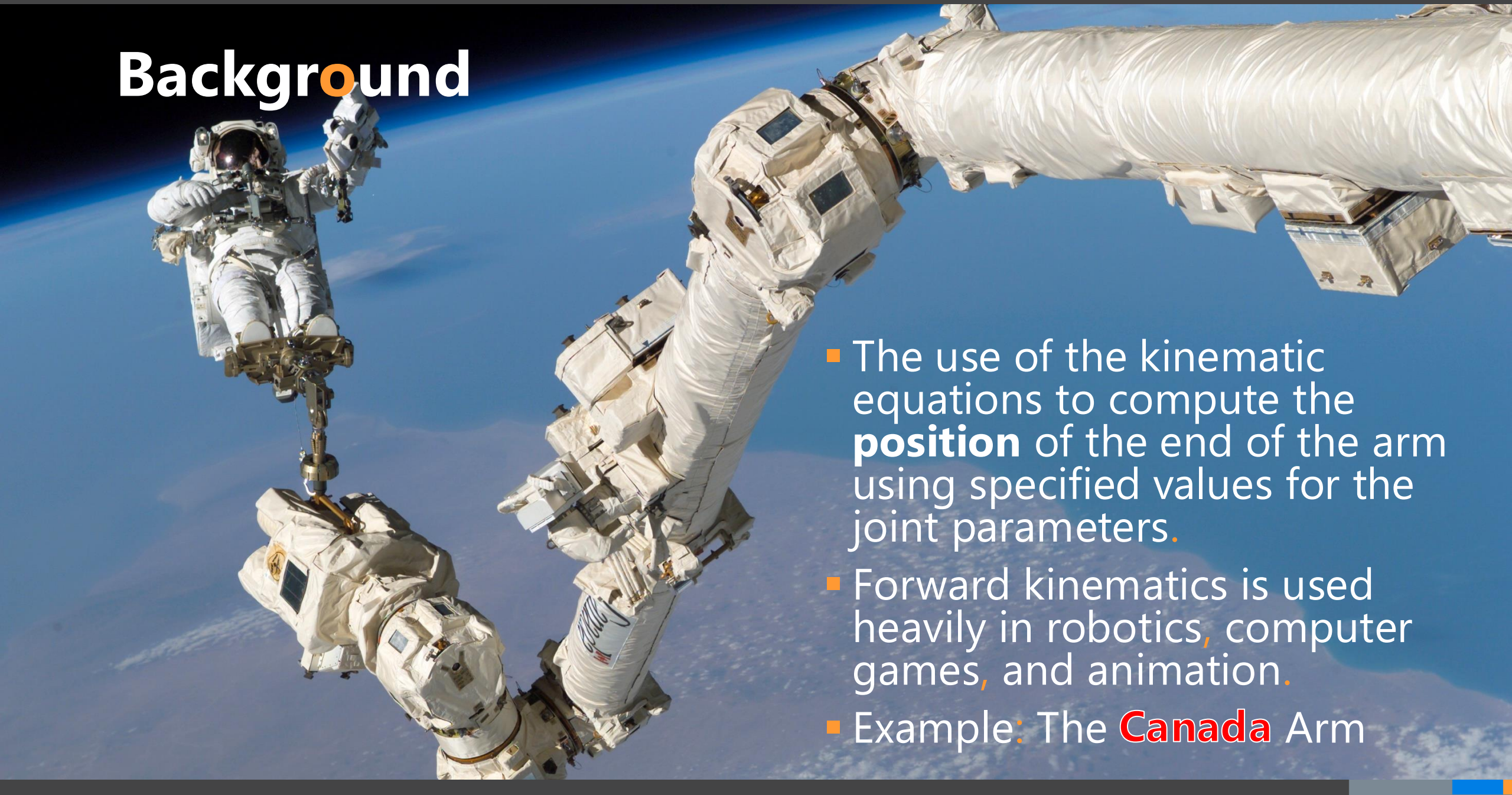
if nothing else, write #cleancode

Agenda

- Problem Background
- Learning Objectives
- Live Coding!



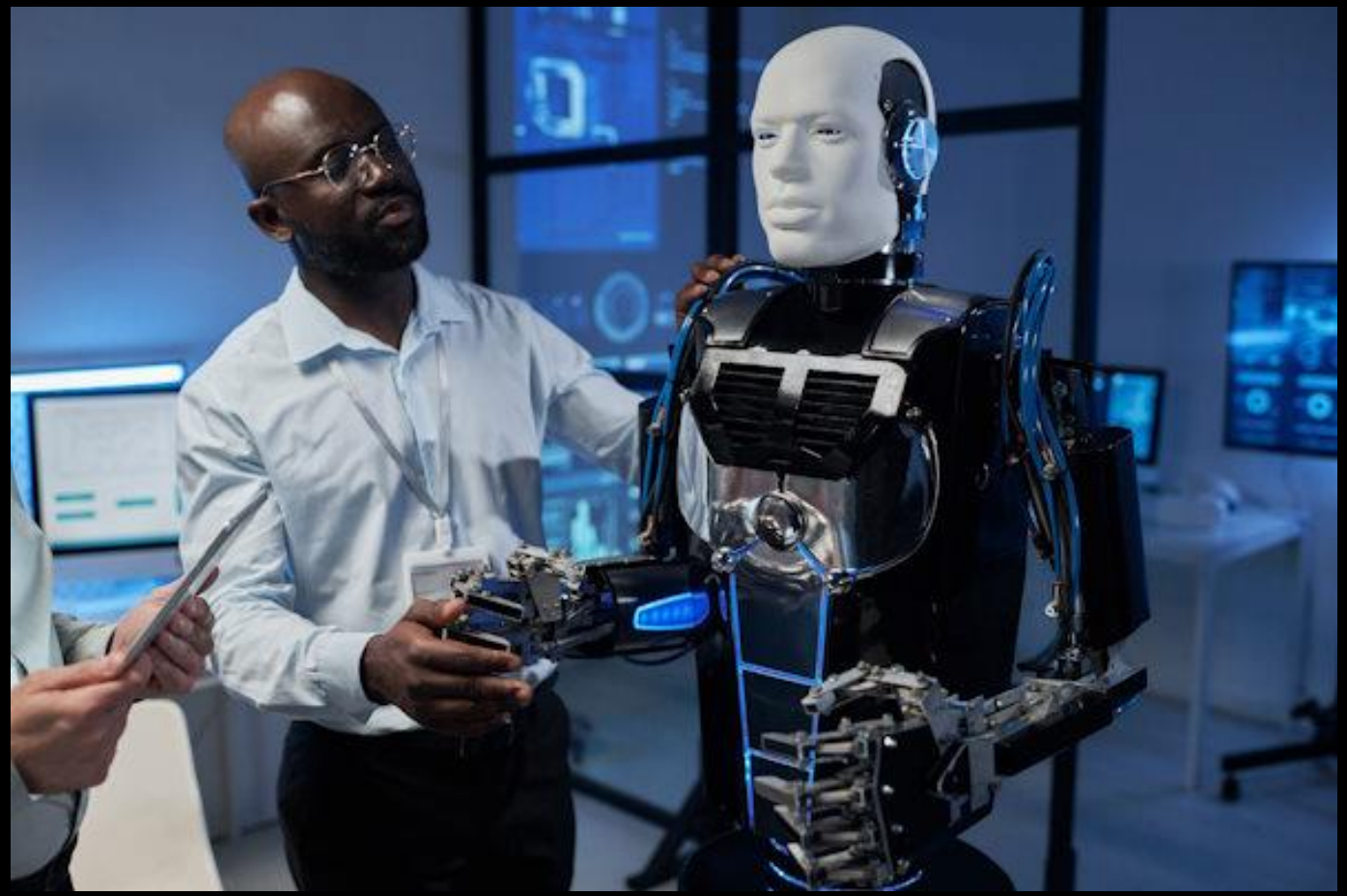
Background

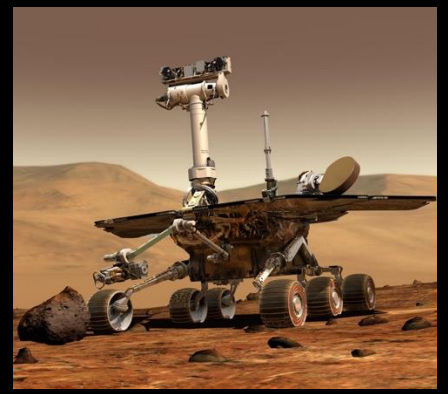


- The use of the kinematic equations to compute the **position** of the end of the arm using specified values for the joint parameters.
- Forward kinematics is used heavily in robotics, computer games, and animation.
- Example: The **Canada** Arm

Other Cool Examples:

Humanoid and Industrial Robots, Animations and Gaming, 3D printing, …

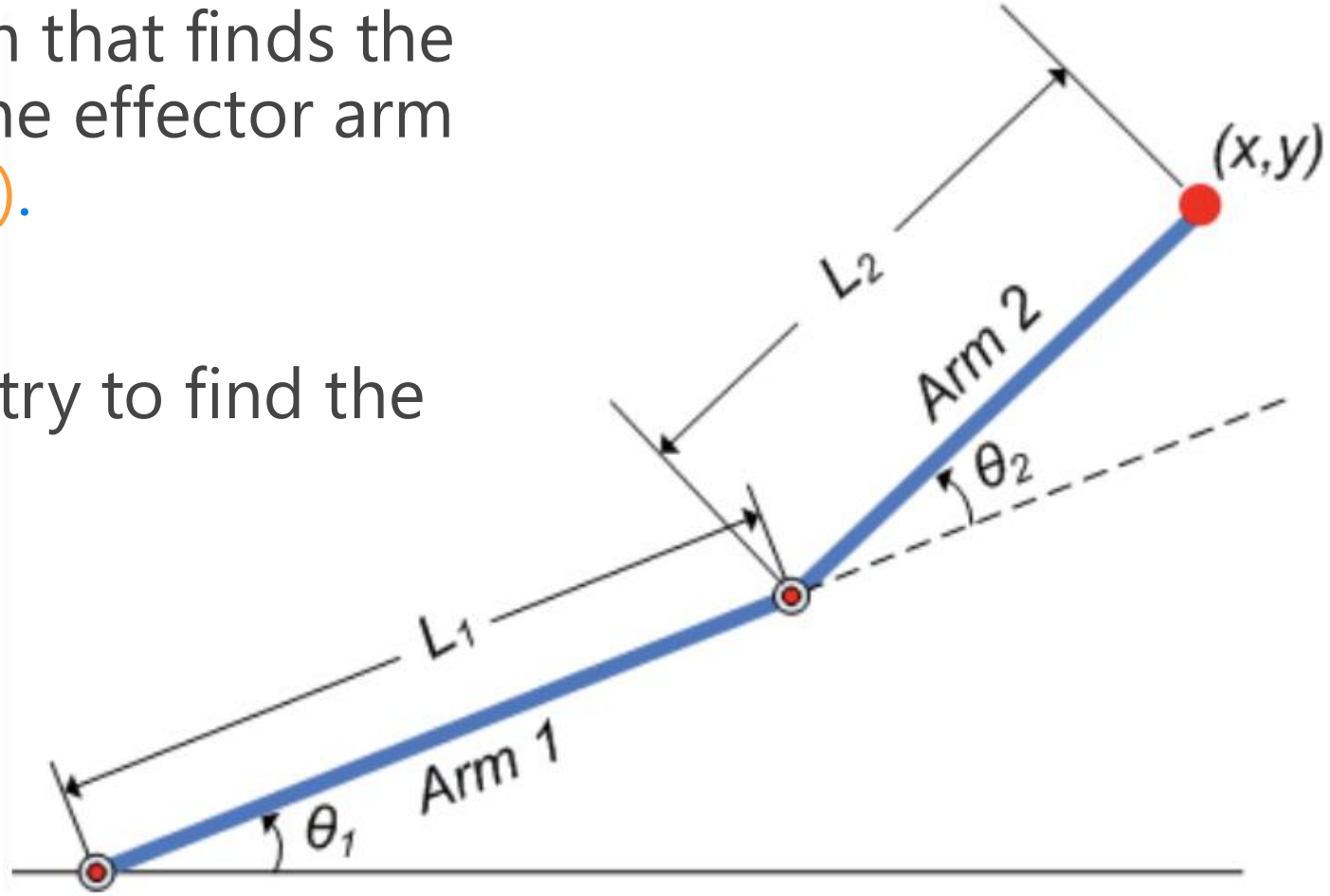




Background

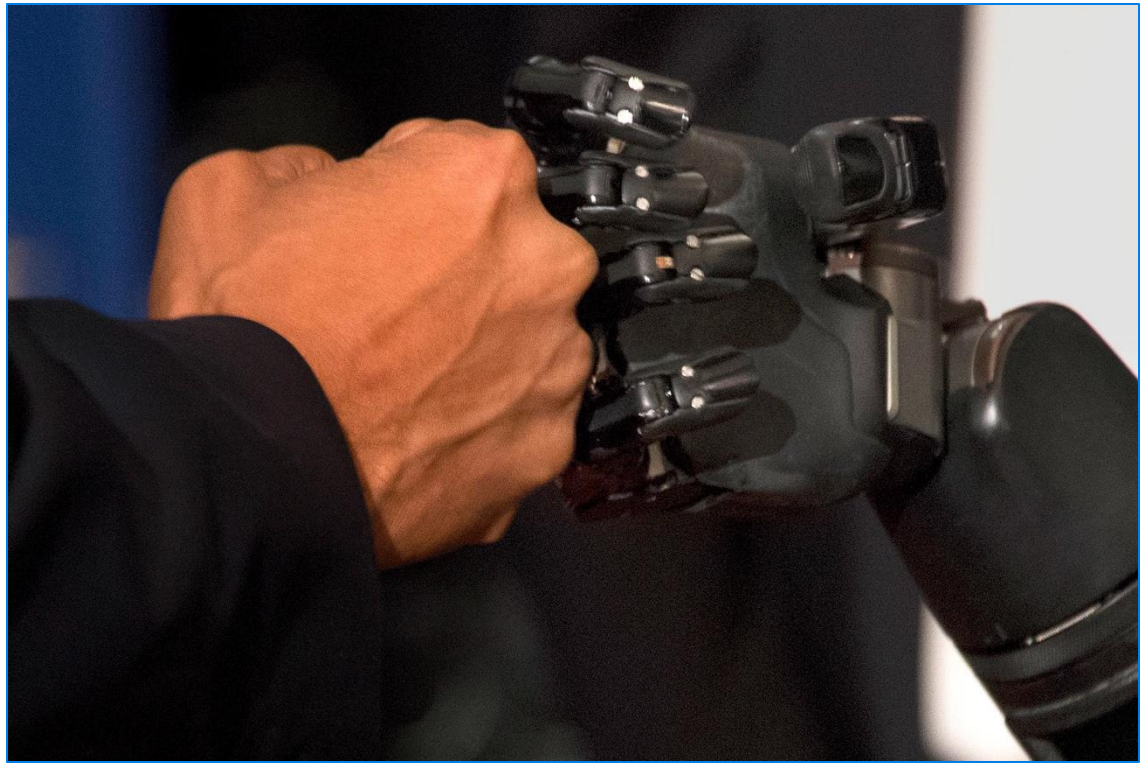
- Goal: Create a program that finds the x- and y- position of the effector arm (i.e. the end of Arm #2).

- Will rely on trigonometry to find the positions.



Learning Objectives

- Practice with user input.
- Learn to define and use custom functions.
- Practice with built-in libraries.



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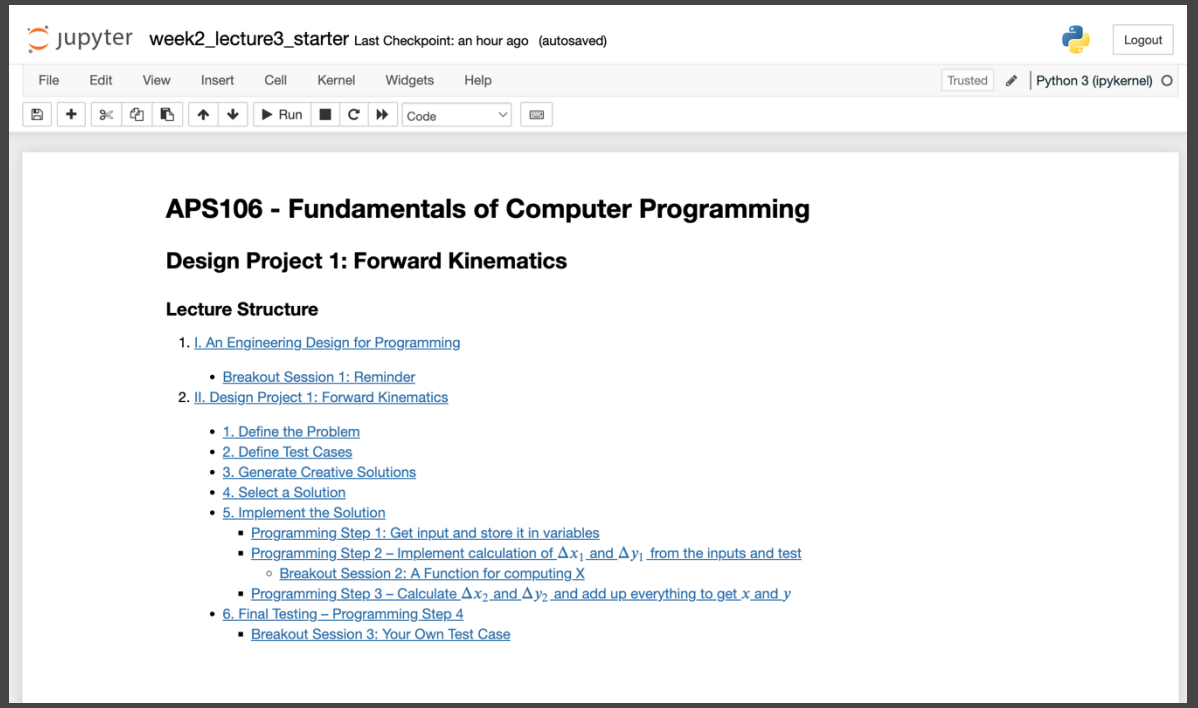
Let's review the notebook now!



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