In this assignment, you will be practicing finding the vector in Span {a} closest to a vector b, and projecting along and orthogonal to a vector, and computing a vector norm.

To complete this assignment, please carefully follow the following instructions:

- 1. Download the detailed instructions for this assignment, The\_Inner\_Product\_problems.pdf
- 2. Download the stencil, The\_Inner\_Product\_problems.py, for this assignment, and move it into your matrix folder.
- 3. You do not need to submit anything marked *ungraded*.
- 4. Support code and data resources can be found at the Coding the Matrix Resources page. Here, you will find orthogonalization.py.
- 5. For each problem/task,
  - 1. Test out your solution in the Python REPL;
  - 2. Copy your solution into the stencil file <a href="The\_Inner\_Product\_problems.py">The\_Inner\_Product\_problems.py</a>;
  - 3. Submit your solution by opening a console window, navigating using cd to the matrix folder, and entering the command python3 coursera\_submit

    The\_Inner\_Product\_problems.py

    They are located on the assignments page.

You can use the submit command to submit solutions for as many tasks as you like at one time.

Have fun!

