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In [4]: import numpy as np
from numpy.linalg import norm
from scipy.spatial.distance import cdist

A = np.array([1, -2, 16, 40, 0])
B = np.array([3.16, 25, -3, -6.5, 108])
C = A - B
print("Array C =", C)
print("\nLength of C =", len(C))
print("\nEulidean Norm of vector A =", norm(A))
print("\nEulidean Norm of vector B =", norm(B))
print("\nThe metric, ||A-B||, =", norm(A-B, ord=2))
print("\nThe dot product, A.B, =", np.dot(A, B))
print("\nThe cosine of theta between A and B =", np.dot(A, B) / norm(A) / norm(B))
print("\nThe angle, theta, between A and B =", np.arccos(np.dot(A, B) / norm(A) / norm(B)))
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Array C = [ -2.16 -27. 19. 46.5 -108. ]

Length of C = 5

Eulidean Norm of vector A = 43.139309220245984

Eulidean Norm of vector B = 111.13161386392262

The metric, ||A-B||, = 122.1511997485084

The dot product, A.B, = -354.84000000000003

The cosine of theta between A and B = -0.07401534413719321

The angle, theta, between A and B = 1.6448794174297847

In [ ]:

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