

Copilot

The best operation to use in this case is `np.tensordot`. This function performs a tensor dot product along specified axes. In your case, you want to perform the dot product along the last axis of your 3D matrix `U1` and your 1D vector `r1`.

Here's how you can do it in Python using NumPy:

```
import numpy as np

# Assuming U1 is your 3D matrix of shape (84, 132, 32)
# and r1 is your 1D vector of shape (32,)

# You can use np.tensordot to perform the dot product along the last axis
result = np.tensordot(U1, r1, axes=([-1], [0]))

# Now, result is a 2D matrix of shape (84, 132)
```

This operation will yield a 2D matrix of size 84x132, which can then be subtracted from your input image. This should give you the desired output. Please replace `U1` and `r1` with your actual variables. Let me know if you have any other questions! 😊