Compare Simple Functions betweeen Numpy and Pytorch

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| # initializing a numpy array  a = np.array(1)  type(a) | # initializing a tensor  a= torch.tensor(1)  type(a) |
| # initializing two arrays  a = np.array(2)  b = np.array(1) | # initializing two tensors  a = torch.tensor(2)  b = torch.tensor(1) |
| # matrix of zeros  a = np.zeros((3,3)) | # matrix of zeros  a = torch.zeros((3,3)) |
| # setting the random seed for numpy  np.random.seed(1)  # matrix of random numbers  a = np.random.randn(3,3) | # setting the random seed for pytorch  torch.manual\_seed(1)  # matrix of random numbers  a = torch.randn(3,3) |
| # setting the random seed for numpy and initializing two matrices  np.random.seed(1)  a = np.random.randn(3,3)  b = np.random.randn(3,3) | # setting the random seed for pytorch and initializing two tensors  torch.manual\_seed(1)  a = torch.randn(3,3)  b = torch.randn(3,3) |
| # matrix addition  c = np.add(a,b)  # matrix subtraction  c = np.subtract(a,b)  # matrix multiplication  c = np.dot(a,b)  # matrix multiplication  c = np.divide(a,b) | # matrix addition  c = torch.add(a,b)  # matrix subtraction  c = torch.sub(a,b)  # matrix multiplication  c = torch.mm(a,b)  # matrix division  c = torch.div(a,b) |
| # matrix transpose  C = np.transpose(a) | # matrix transpose  C = torch.t(a) |
|  | # initializing two tensors  a = torch.tensor([[1,2],[3,4]])  b = torch.tensor([[5,6],[7,8]])  # concatenating vertically  torch.cat((a,b))  # concatenating horizontally  torch.cat((a,b),dim=1) |
|  | # setting the random seed for pytorch  torch.manual\_seed(1)  # initializing tensor  a = torch.randn(3,4)  # reshaping tensor  b = a.reshape(1,12) |
|  | # converting the numpy array to tensor  tensor = torch.from\_numpy(a) |