

Vectors & Matrices

Exercises

negateeveryother

- Write a function `negateeveryother` that takes a matrix `M` and returns `M`, with its every other element (under linear indexing) negated.
- ```
>> negateeveryother([1 2 3; 4 5 6])
ans =
-1 -2 -3
4 5 6

>> negateeveryother([1 2 3; 4 5 6; 7 8 9])
ans =
-1 2 -3
4 -5 6
-7 8 -9
```

## mytranspose

- Write a function `mytranspose.m` that takes a matrix `m` and returns its transpose. Use one or more of `flipud`, `fliplr`, `reshape`, and `rot90` functions to calculate the transpose of `m` (without using the transpose operator).
- Test your function on a random 3x4 matrix.

## splitvector

- Write a function `splitvector` that takes a vector `vec`. And returns two outputs, containing the first and second halves of `vec`. If `vec` has odd number of elements, the first half should have one more element than the second half. (Hint: Use a rounding function, such as `fix`.)

# bloodpressureratio

- In a research study, you are investigating whether there is a relationship between the ratio of the systolic to diastolic blood pressure and the blood glucose levels.
- Write a function `bloodpressureratio` that takes systolic and diastolic blood pressures of patients as two separate inputs and returns a single variable containing the ratio of the systolic and diastolic pressures for each patient.