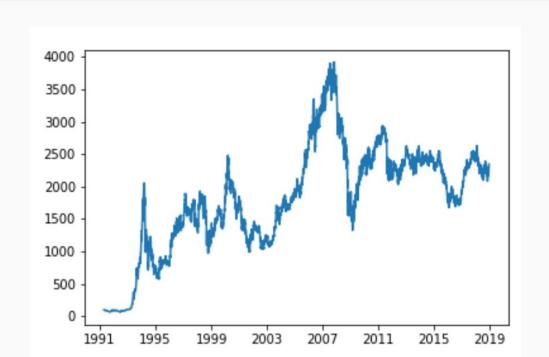
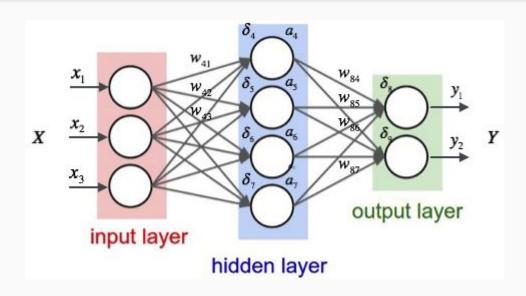
Przewidywanie kursów giełdowych przy pomocy sztucznych sieci neuronowych

Piotr Bródka

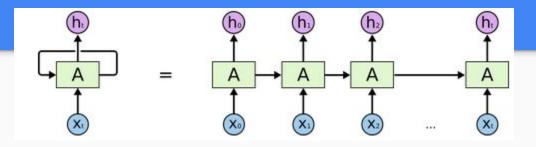
WIG20

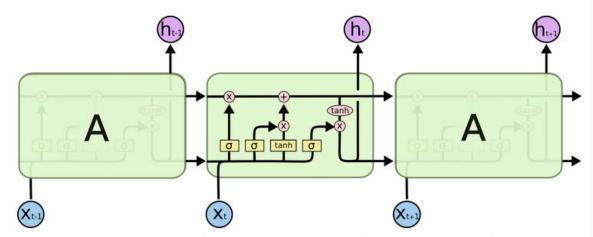


Perceptron wielowarstwowy



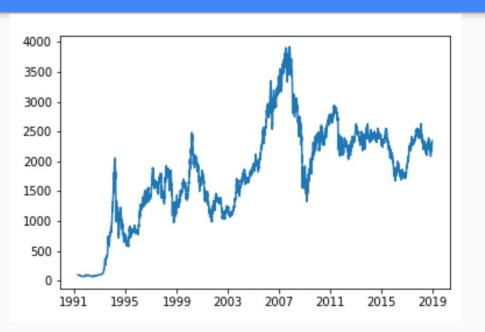
LSTM

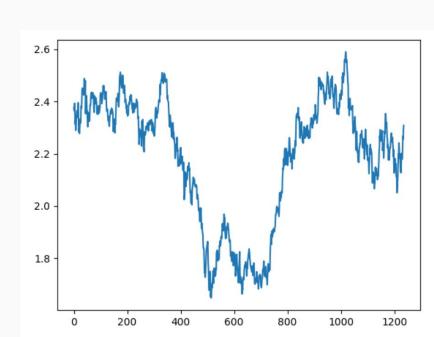




The repeating module in an LSTM contains four interacting layers.

Regresja?





Wyniki

| Į. | | | | | | |
|---------|----------|----------|----------|----------|----------|----------|
| acc_5 | acc_10 | acc_15 | acc_20 | acc_30 | acc_40 | acc_50 |
| 0.488 | 0.480 | 0.496 | 0.537 | 0.496 | 0.436 | 0.496 |
| 0.488 | 0.480 | 0.496 | 0.537 | 0.496 | 0.436 | 0.496 |
| 0.480 | 0.512 | 0.438 | 0.529 | 0.487 | 0.504 | 0.530 |
| 0.485 | 0.491 | 0.477 | 0.534 | 0.493 | 0.459 | 0.507 |
| 0.569 | 0.439 | 0.545 | 0.521 | 0.496 | 0.504 | 0.487 |
| 0.502 | 0.480 | 0.490 | 0.532 | 0.494 | 0.468 | 0.503 |
| 0.577 | 0.537 | 0.529 | 0.471 | 0.403 | 0.538 | 0.487 |
| 0.513 | 0.488 | 0.496 | 0.523 | 0.481 | 0.478 | 0.501 |
| 0.496 | 0.610 | 0.488 | 0.479 | 0.496 | 0.547 | 0.470 |
| 0.511 | 0.502 | 0.495 | 0.518 | 0.482 | 0.486 | 0.497 |
| 0.545 | 0.593 | 0.512 | 0.413 | 0.538 | 0.590 | 0.530 |
| 0.514 | 0.510 | 0.497 | 0.509 | 0.487 | 0.495 | 0.500 |
| 0.488 | 0.488 | 0.554 | 0.463 | 0.504 | 0.530 | 0.391 |
| 0.512 | 0.508 | 0.501 | 0.505 | 0.489 | 0.498 | 0.492 |
| 0.537 | 0.480 | 0.479 | 0.512 | 0.462 | 0.487 | 0.496 |
| 0.514 | 0.506 | 0.499 | 0.506 | 0.487 | 0.497 | 0.492 |
| 0.472 | 0.520 | 0.488 | 0.504 | 0.462 | 0.487 | 0.539 |
| 0.511 | 0.507 | 0.499 | 0.506 | 0.485 | 0.496 | 0.495 |
| 0.480 | 0.463 | 0.504 | 0.545 | 0.496 | 0.556 | 0.487 |
| 0.509 | 0.507 | 0.499 | 0.508 | 0.486 | 0.498 | 0.495 |

0.5203250.5619830.4715450.5316800.4552850.4876030.5228650.4682930.4552850.5123970.4796750.4380170.4679060.5121080.4552850.4958680.4667580.5106320.5284550.5371900.4715040.5126750.4959350.4545450.4731330.5087990.5123970.5284550.5365850.545455

0.510929

acc 10

0.489555

 acc_20

acc 30

0.529412

0.521008

0.546218

0.526050

0.478992

0.571429

0.525117

0.546218

0.527035

0.470588

0.522693

0.529605

0.522020

0.462185

0.512605

0.518190

Wnioski....