

CPE 486/586: Machine Learning for Engineers

01 Tools for Machine Learning

Fall 2025

Rahul Bhadani

Outline

1. Command Line Tools and Linux
2. Python
3. Git and GitHub
4. Development Environment
5. Packages and Package Manager
6. Jupyter Notebook
7. Markdown
8. Latex
9. Other Notable Tools

Command Line Tools and Linux

1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	0	0	1
0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	1	0	1
1	0	0	1	0	1	0	1	1	0	0	1	1	1	1	1	1	0	1	0

Python

1	1	1	0	0	0	1	1	0	0	1	0	0	1	1	1	0	0	1	1
0	1	0	1	0	1	1	0	1	1	1	1	0	0	0	1	0	0	0	1
0	1	1	0	0	1	0	0	1	0	1	1	0	1	1	1	0	0	0	1

Git and GitHub

0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	0	1	1
0	0	0	1	0	1	1	0	1	1	1	1	0	0	1	1	0	1	0	0
1	0	1	0	0	0	1	1	1	0	0	0	0	1	0	1	0	0	1	0

Development Environment

1	1	0	1	1	0	0	0	1	0	0	0	0	1	1	0	1	1	1	1
1	0	0	0	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	1
0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1	1

Packages and Package Manager

0	0	0	0	1	0	1	1	0	1	0	1	0	1	1	0	0	1	1	0
0	0	1	1	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0
0	0	1	0	1	1	1	1	0	1	0	0	0	0	1	1	1	0	1	0

Jupyter Notebook

0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0	0
0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	0	0
0	1	0	0	0	1	0	0	1	1	0	1	0	0	1	1	1	0	0	1

Markdown

```
0 1 1 1 1 1 0 0 0 0 1 0 1 0 0 1 0 0 0 1
0 0 1 0 0 1 1 1 0 0 1 0 1 0 0 1 0 0 0 0
1 1 0 0 1 0 0 0 1 0 0 1 0 1 0 0 1 0 0 0
```

Latex

0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	1	1	1	0
1	0	1	1	0	0	1	1	1	0	1	0	1	0	0	0	0	0	1	0
0	0	1	0	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	0

Other Notable Tools

0	0	0	1	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1
1	1	0	1	1	1	0	0	0	1	0	0	0	0	1	1	1	0	1	1
0	1	1	1	1	1	0	0	0	0	1	0	0	1	1	0	1	0	0	1

The End