

# Solutions hand-in Template for Machine Learning Assignments

Raghavendra Selvan

November 23, 2016

This is a sample  $\text{\LaTeX}$  template that *can* be used to submit your solutions. We encourage you to use  $\text{\LaTeX}$  to hand-in your solutions. This template is only to get you started if you have little or no experience with this manner of typesetting documents. Look at the source code (`main.tex`) to see how to generate some of this formatting. The file `macros.tex` has several other shorthands which will be useful when you want to typeset regularly encountered math symbols.

## 1 Task 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

## 2 Task 2

$$\mathbb{E}[X - Y] = \mathbb{E}[X] - \mathbb{E}[Y] \quad (1)$$

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

### 2.1 A sub task

Identity matrix of order 4:

$$\mathbf{I} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix} \quad (2)$$

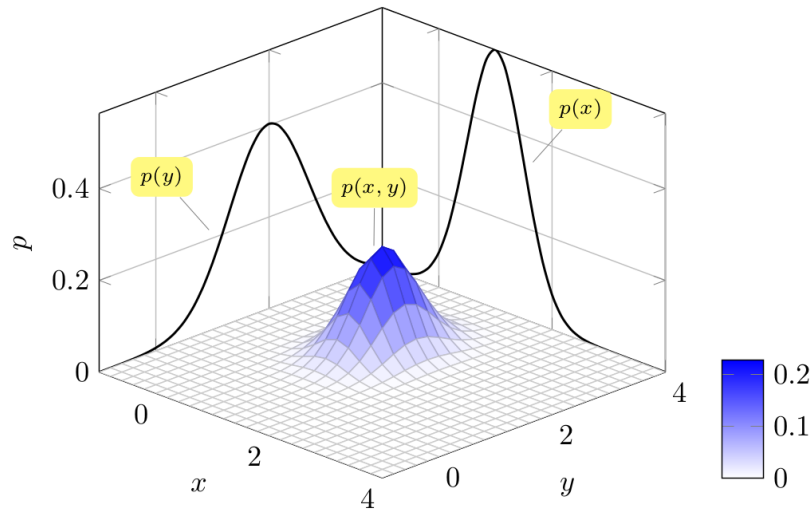


Figure 1: Illustration of a bivariate Gaussian distribution. The marginal and joint probability distributions are denoted, and identified as  $p(x)$ ,  $p(y)$  and  $p(x, y)$ , respectively.

## 2.2 More subtasks ..

A bullet list

- Supervised learning
- Unsupervised learning
- Semi-supervised learning

Or, an enumerated list

1. Supervised learning
2. Unsupervised learning
3. Semi-supervised learning

Obligatory citation, and I decided to point to your text book [1]. The references sit in a separate file, ref.bib.

## References

- [1] Y. S. Abu-Mostafa, M. Magdon-Ismail, and H.-T. Lin, *Learning from data*. AMLBook Singapore, 2012, vol. 4.