Importing Images from Inkscape to LaTeX

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1 Workflow: Inkscape to LaTeX

1.1 Creating and Saving Graphics

To create graphics for use with the `import` package, follow these steps in Inkscape:

1. **Design:** Create your vector graphic. Use the text tool for any labels you want LaTeX to typeset.
2. **Save SVG:** Navigate to **File > Save As...** and select **Inkscape SVG (*.svg)**.
3. **Export PDF + LaTeX:**
   - Go to **File > Export...** (or `Ctrl+Shift+E`).
   - Select **Portable Document Format (*.pdf)** from the format dropdown.
   - In the export settings, check the box: **Omit text in PDF and create LaTeX file**.
   - Click **Export**.

   Inkscape generates two files: `filename.pdf` (graphics) and `filename.pdf_tex` (text positioning).

1.2 Importing into LaTeX

You need `\usepackage{import, graphicx, xcolor}`. Include the graphic as follows:

```
\begin{figure}[ht]
    \centering
    \incfig[0.8]{./figures/}{filename}
    \caption{Description of the vector graphic.}
    \label{fig:my_graphic}
\end{figure}
```

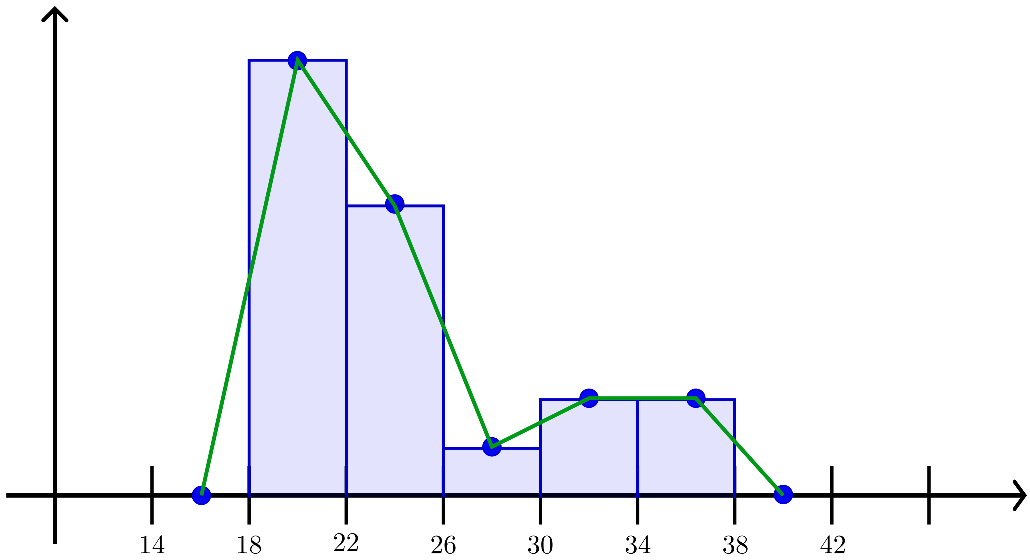

Figure 1: Histogram using relative frequencies.

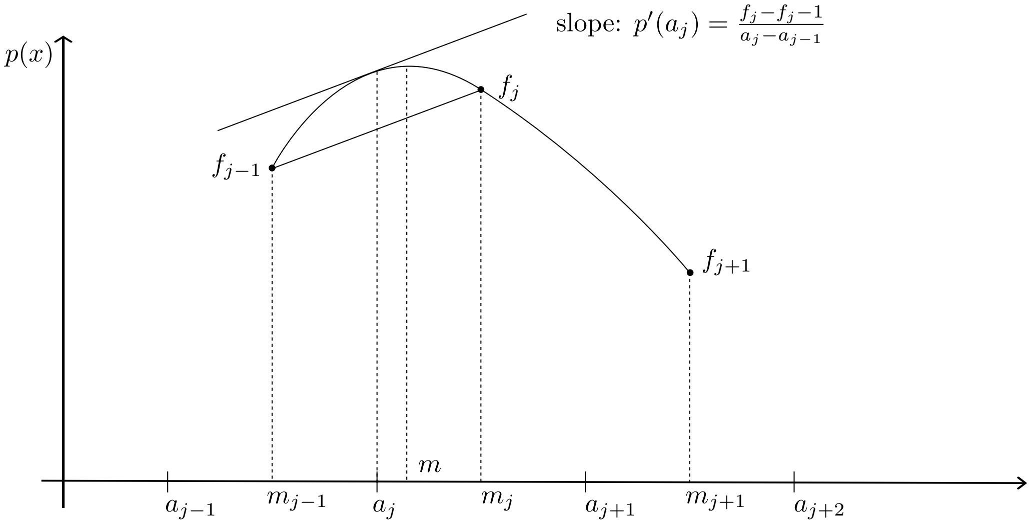

Figure 2: Mode interpolation at the points $(m_{j-1}, f_{j-1}), (m_j, f_j), (m_{j+1}, f_{j+1})$ we interpolate a second-degree polynomial, p. We assume that p reaches its maximum at $m \in [a_{j-1}, a_j]$.

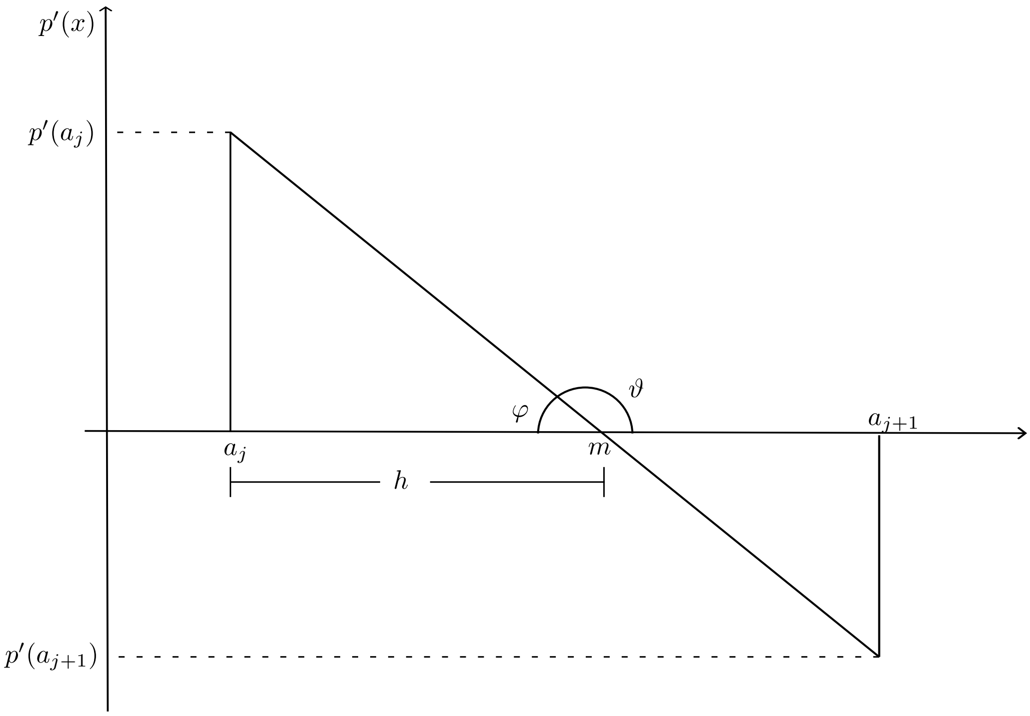

Figure 3: The first derivative of a second-degree polynomial is a linear function. The derivative vanishes at m and the unknown is the distance h from the end a_j of the class C_j.

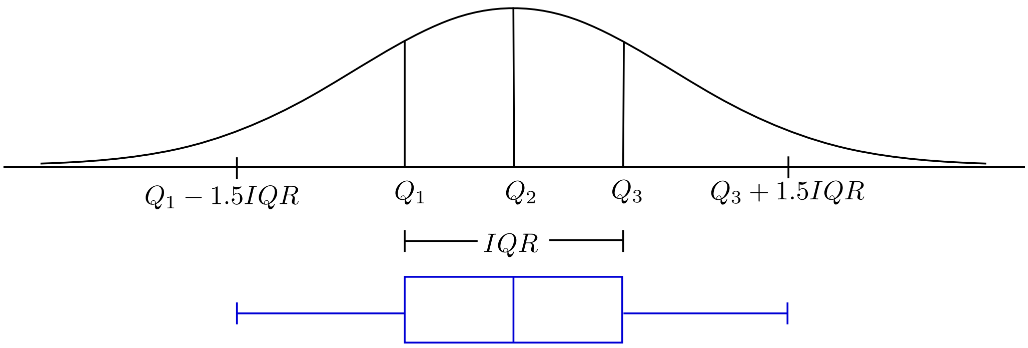

Figure 4: Box plot.

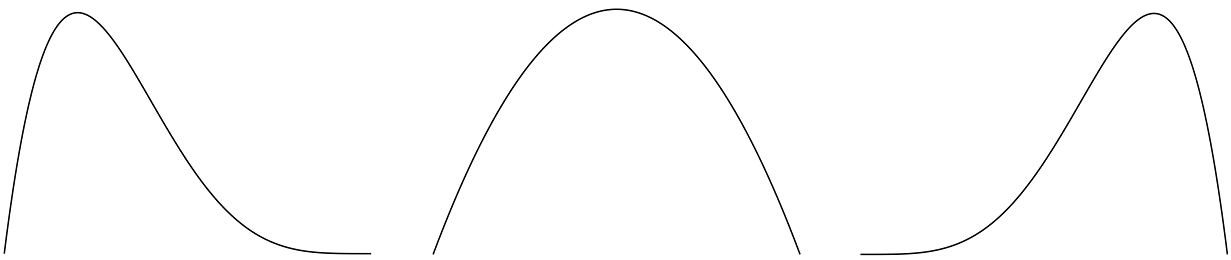

Figure 5: Distributions with positive asymmetry, symmetry, and negative asymmetry.

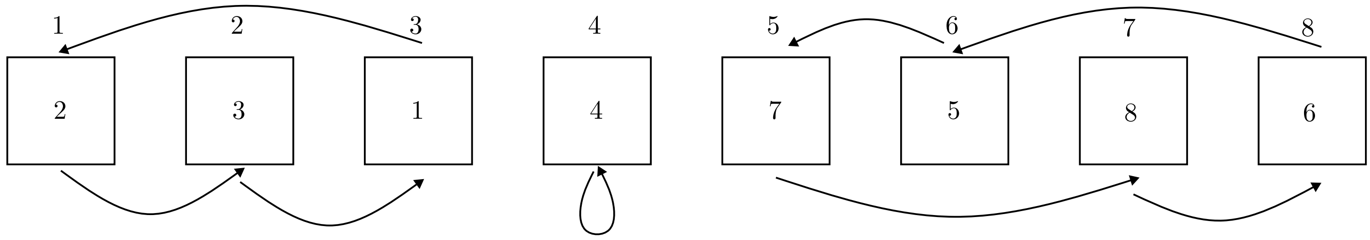

Figure 6: The prisoners' problem for 8 prisoners. An arrangement of the numbers 1 to 8 in which the prisoners win. Prisoner number 1 opens box 1, then box 2, then box 3, and stops because he finds his number. Prisoner number 8 opens box 8, then box 6, then box 5, then box 5 again, and stops because he finds his number. All cycles have a length less than or equal to 4.

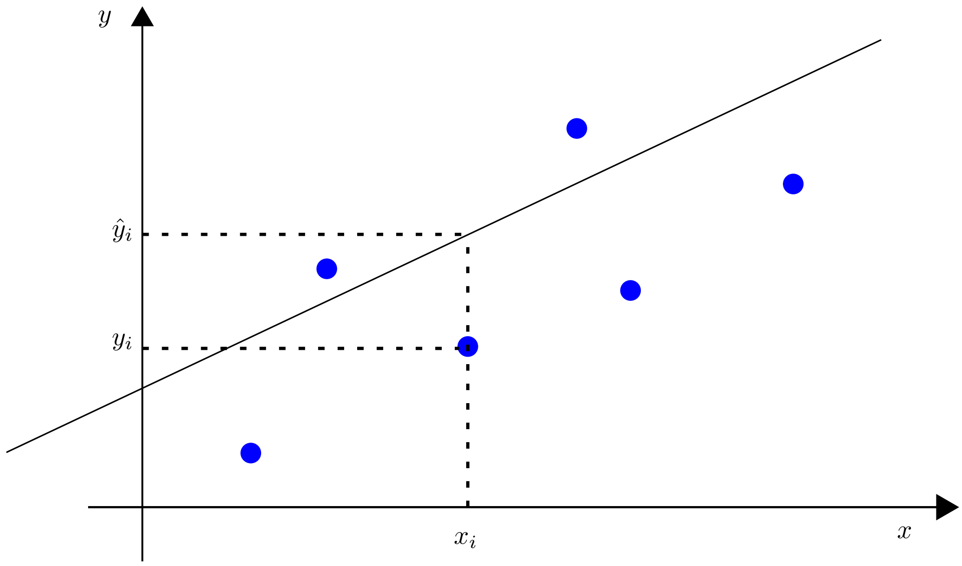

Figure 7: A set of points $\{(x_i, y_i)\}_{i=1}^n$ and $\hat{y}_i$ the prediction of the model at the point x_i.

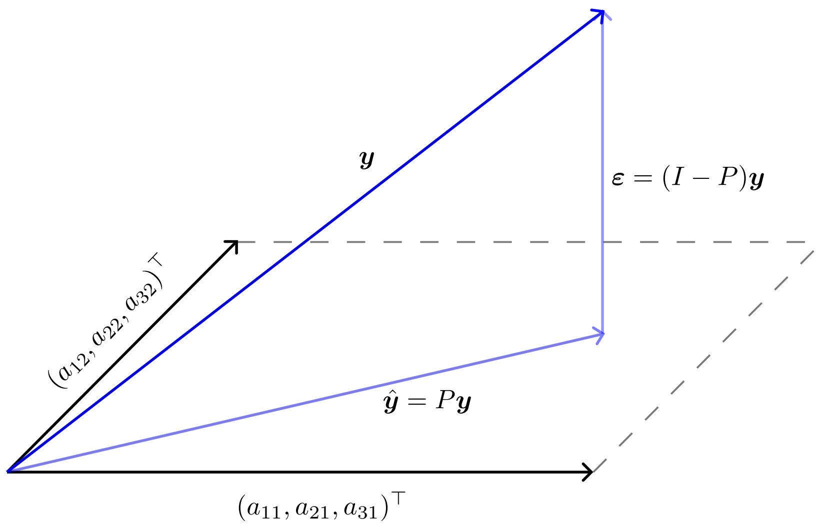

Figure 8: The data vector $\boldsymbol{y}$ is the sum of two vectors: the prediction vector $\hat{\boldsymbol{y}}$, which is a linear combination of the columns of the matrix A, and the error vector $\boldsymbol{\varepsilon}$, which is orthogonal to $\hat{\boldsymbol{y}}$. The vector $\hat{\boldsymbol{y}}$ is the projection of $\boldsymbol{y}$ onto the column space via the projection matrix P, and the vector $\boldsymbol{\varepsilon}$ is the projection of $\boldsymbol{y}$ onto the nullspace of the column space via the projection matrix $I - P$.