POLITECNICO
MILANO 1863

# AN2DL - Second Challenge Report
## Team Name

JIALI CLAUDIO HUANG, YUJUE WANG, PENG RAO, LINGLI ZHANG

HUANG JIALI CLAUDIO, Yujue WANG, Peng Rao, lingli11

Matricola1, 11047870, 11022931, 11022009

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## 1 Introduction

In this section, you should present your project's context and objectives. You might want to:

- Define the problem (*you may use italics to highlight definitions*)
- State your goals (**emphasise key points with bold**)
- Outline your approach

For instance, you might write: "This project focuses on *image classification* using **deep learning** techniques."

## 2 Problem Analysis

Here you can discuss your initial analysis of the problem. Consider including:

1. Dataset characteristics
2. Main challenges
3. Initial assumptions

If you need to reference papers, use the citation command: Recent work [**?**] suggests..."

## 3 Method

This section should detail your approach. You can use equations to explain your methodology. For example, a simple model representation:

$$f(x) = \text{softmax}(Wx + b) \tag{1}$$

Or a more complex loss function:

$$\mathcal{L} = -\frac{1}{N}\sum_{i=1}^{N} y_i \log(\hat{y}_i) \tag{2}$$

Reference these equations in your text, like:"As shown in equation 1..."

## 4 Experiments

For your experiments, you might want to present your results in tables. Here's an example of a wide table comparing different models:

For more specific measurements, you might use a narrower table:

Table 1: An example of wide table. Best results are highlighted in **bold**.

| Model | Accuracy | Precision | Recall | ROC AUC |
|---|---|---|---|---|
| VGG18 | 72.20 ± 3.06 | 94.95 ± 0.52 | 86.95 ± 0.55 | 80.16 ± 0.81 |
| Custom Model | 27.71 ± 3.19 | 75.70 ± 1.07 | 55.75 ± 2.16 | 36.60 ± 1.26 |
| ResNet18 | **89.24 ± 2.38** | **95.54 ± 0.49** | **93.43 ± 1.30** | **91.68 ± 0.71** |

Table 2: An example of table. Best results may be highlighted in **bold**.

| Time [$\mu s$] | Distance [mm] |
|---|---|
| 22±4 | 8±1 |
| 17±3 | 7±1 |
| 15±3 | 6±1 |
| 13±2 | 5±1 |
| 10±2 | 4±1 |
| 8±2 | 3±1 |
| 5±1 | 2±1 |
| 37±1 | 1±1 |

You can also include figures to visualise your results:

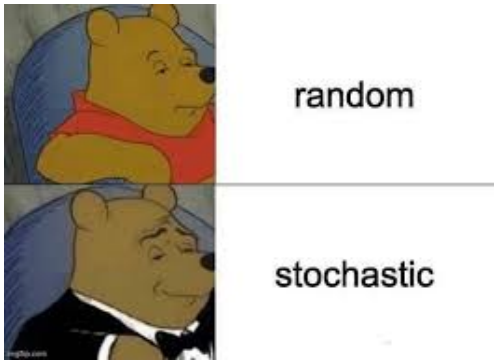


Figure 1: Example figure showing [describe what the figure shows]

Reference figures using like:"As shown in Figure 1..."

## 5 Results

Present your main findings here. You might want to:

- Compare your results with baselines
- Highlight key achievements using **bold text**
- Explain any unexpected outcomes

## 6 Discussion

In this section, analyse your results critically. Consider:

- Strengths and weaknesses
- Limitations and assumptions

## 7 Conclusions

Summarise your work and discuss potential future directions. This is where you can:

- Restate main contributions
- Suggest improvements
- Propose future work