

UNIVERSITAT DE VIC - UNIVERSITAT CENTRAL DE  
CATALUNYA

FACULTAT DE CIÈNCIES, TECNOLOGIA I ENGINYERIES

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## Title of the project

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Institution or research  
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## **Abstract**

How do I write a great abstract? Well, [here](#) you will find some useful tips[1].

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## Acknowledgments

Comment this out if not needed.

**Contents**

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Hypothesis and Objectives</b>	<b>2</b>
<b>3</b>	<b>Methods</b>	<b>3</b>
<b>4</b>	<b>Results</b>	<b>4</b>
<b>5</b>	<b>Discussion</b>	<b>5</b>
<b>6</b>	<b>Conclusions</b>	<b>6</b>
<b>7</b>	<b>References</b>	<b>7</b>
<b>8</b>	<b>Annexes</b>	<b>8</b>
8.1	Annex 1 . . . . .	8



**Figure 1:** Exemple de figura.

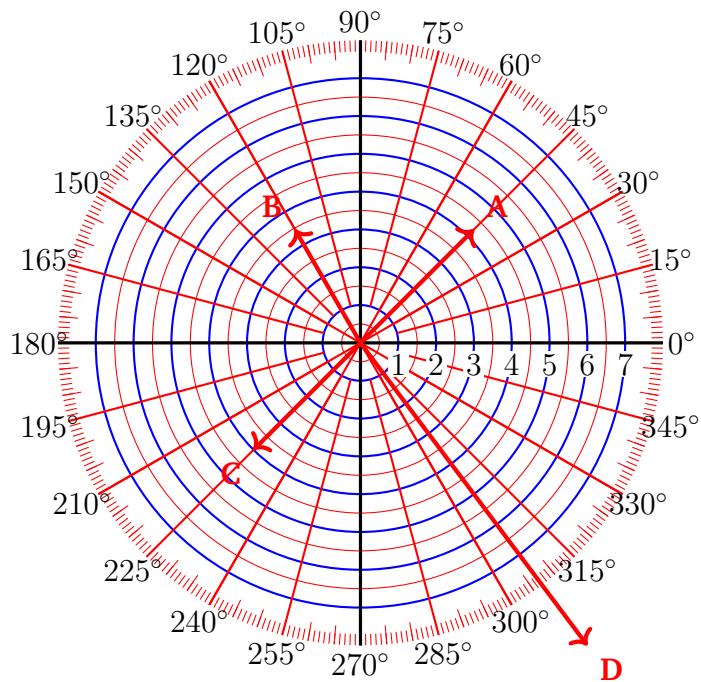
## 1 Introduction

The introduction contains information on the state of the art, trying to go from a general question to a more specific one that you aim at solving in this project. An example of how to add a citation is given [2]. Figure 1 is an example of a figure.

## 2 Hypothesis and Objectives

What do you exactly want to achieve in this project? What is the hypothesis you are trying to demonstrate or rebate here? List the specific objectives you have in answer the final questions posed in the iontroduction.

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**Figure 2:** Exemple de figura amb tikz.

### 3 Methods

In this section you will explain in deep detail (to make it easier for others to independently reproduce your work) the different methods you are going to use to try developing your objectives in the previous section.

Figure 2 is an example of a figure generated with the tikz library.

## 4 Results

In an ordered way, explain the results you have obtained here. This should include a collection of figures, tables, schemas, etc that support the claims that you are obtainig such results. The captions of your figures and tables are as important as the text, and they need to explain "the story" you want to use to demonstrate the claims you do in the project.

Some Equations:

$$\begin{aligned}f(x) &= x^2 \\g(x) &= \frac{1}{x} \\F(x) &= \int_b^a \frac{1}{3}x^3\end{aligned}$$

Or the vectorial expression of a line in  $\mathbb{R}^2$  that goes through point  $P(5, -4)$  with a direction parallel to the vector  $v = (-3, 2)$  can be written as:

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} x_0 \\ y_0 \end{pmatrix} + t \begin{pmatrix} v_1 \\ v_2 \end{pmatrix}$$

with its parametric expression:

$$\begin{cases} x = x_0 + tv_1 \\ y = y_0 + tv_2 \end{cases} \quad (1)$$

In Eq. 1  $(x_0, y_0)$  is a point in the line and  $v = (v_1, v_2)$  is its generating vector. Here:

$$\begin{cases} x = 5 - 3t \\ y = -4 + 2t \end{cases}$$

**Table 1:** Example of a table

Sistema	$(A B)$	Solucions	Rangs
$10x + 12y = 120$ $0x + 0y = 0$	$\begin{pmatrix} 10 & 12 & 120 \\ 0 & 0 & 0 \end{pmatrix}$	$x = \lambda$ $y = \frac{120-10\lambda}{12}$	$rg(A) = 1$ $rg(A B) = 1$
$10x + 12y = 120$ $10x + 12y = 120$	$\begin{pmatrix} 10 & 12 & 120 \\ 10 & 12 & 120 \end{pmatrix}$	$x = \lambda$ $y = \frac{120-10\lambda}{12}$	$rg(A) = 1$ $rg(A B) = 1$
$10x + 12y = 120$ $5x + 6y = 60$	$\begin{pmatrix} 10 & 12 & 120 \\ 5 & 6 & 60 \end{pmatrix}$	$x = \lambda$ $y = \frac{120-10\lambda}{12}$	$rg(A) = 1$ $rg(A B) = 1$
$10x + 12y = 120$ $1x + y = 10$	$\begin{pmatrix} 10 & 12 & 120 \\ 5 & 6 & 10 \end{pmatrix}$	$x = 0$ $y = 10$	$rg(A) = 2$ $rg(A B) = 2$
$10x + 12y = 120$ $10x + 12y = 100$	$\begin{pmatrix} 10 & 12 & 120 \\ 10 & 12 & 100 \end{pmatrix}$	No té solució	$rg(A) = 1$ $rg(A B) = 2$

## 5 Discussion

Now it is time to put everything together ad to describe how well your results explain your hypothesis through the fullfilling of your objectives. Although everybody likes explaining successful stories, it is equally valid to explian how the project did not succeed in its objectives or in demonstratyng its hypothesis as a whole. All comes with the extra perk of opening new questions and facilitating the development of new good research.

Table 1 is an example of a table containing equations as well.

## **6 Conclusions**

This section can be merged with the previous one, eventually, and summarizes the main findings of the article.

## **7 References**

## References

- [1] Make a Great First Impression: 6 Tips for Writing a Good Abstract | AJE. [https://www.aje.com/arc/make-great-first-impression-6-tips-writing-strong-abstract/?utm\\_term=&utm\\_campaign=AJE\\_Digital\\_Prosp\\_Display\\_EN&utm\\_source=adwords&utm\\_medium=ppc&hsa\\_acc=3768250728&hsa\\_cam=20934774130&hsa\\_grp=&hsa\\_ad=&hsa\\_src=x&hsa\\_tgt=&hsa\\_kw=&hsa\\_mt=&hsa\\_net=adwords&hsa\\_ver=3&gad\\_source=1&gclid=Cj0KCQjwncWvBhD\\_ARIsAEb2HW8VmH5upvC1-7VY-ZjuMa-adcPmbd3JwVzV3cyFXgkIjFxoJpRIYhoaAnutEALw\\_wcB](https://www.aje.com/arc/make-great-first-impression-6-tips-writing-strong-abstract/?utm_term=&utm_campaign=AJE_Digital_Prosp_Display_EN&utm_source=adwords&utm_medium=ppc&hsa_acc=3768250728&hsa_cam=20934774130&hsa_grp=&hsa_ad=&hsa_src=x&hsa_tgt=&hsa_kw=&hsa_mt=&hsa_net=adwords&hsa_ver=3&gad_source=1&gclid=Cj0KCQjwncWvBhD_ARIsAEb2HW8VmH5upvC1-7VY-ZjuMa-adcPmbd3JwVzV3cyFXgkIjFxoJpRIYhoaAnutEALw_wcB). pages i
- [2] Robert E Wood. Spelunking in the pediatric airways: explorations with the flexible fiberoptic bronchoscope. *Pediatric clinics of North America*, 31(4):785–799, 1984. pages 1

## 8 Annexes

### 8.1 Annex 1