

Department of Information Engineering and Computer Science

Bachelor’s Degree in

...

final dissertation

Title

*Subtitle (optional)*

|  |  |
| --- | --- |
| Supervisor  … | Student  ... |

Academic year …/...

PLEASE NOTE: DO NOT MODIFY THE PAGE LAYOUT!

**Acknowledgements**

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***Note***

*The maximum number of pages is* ***30****, including:*

* *index*
* *abstract*
* *chapters*

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**Abstract**

….

***Note***

*The abstract is a short summary of the work describing the target, the subject of the thesis, the methodology and the techniques, the data collection and elaboration, the explanation of the reached results and the conclusion. The abstract of the dissertation must have a maximum length of 3 pages and must include the following information:*

* *context and motivation*
* *short summary of the main problem you have dealt with*
* *developed and /or used techniques*
* *reached results, the personal contribution of the student has to be highlighted*

1. **Chapter 1**

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1. **Chapter 2**

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3.1.4 **Python 3.10.12**

1. Python was used for the ease of development and speed of deployment as it doesn’t need compilation; python with PX4 has also much more documentation and examples than any other language.
2. Other programming languages that have better performance like c++ were considered but discarded due to minimal documentation, much more developing time and a very slow overall development experience and unpleasant experience:
3. ROS2 compilations have massive overheads, even for well written cmake and headers files while python has none;
4. a part of the code runs on the companion computer that, while powerful, is not really suited for continuous compilations (installing all the PX4 dependencies and building the OptitTrack package took more that 1 hour and a half)
5. The runtime overhead of python gets completely eclipsed by the network delay.

The version 3.10.12 is the officially supported by ROS2 Humble.

3.1.5 **PX4**

**Open source flight control solution for drones.**

**Bibliography**

[1] Coulouris G. F., Dollimore J. e Kindberg T, Distributed Systems: concepts and Design, 1994

[2] Dalal N., Triggs B., Histograms of Oriented Gradients for Human Detection, 2005

[3] Donoho D. L., Compressed Sensing,

[4] http://www.ictbusiness.it/

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**Attachment A Title of the first attachment**

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**Attachment B Title of the second attachment**

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