

# ZEPHYR SERRET VERBIST

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## OBJECTIVE

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Software Engineer with ~ 2 years of experience in Full Stack Development, seeking full-time Software Engineering roles.

## SKILLS

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<b>Programming Languages</b>	C++, C, Python, Java, SQL, Javascript, LaTeX.
<b>Technical Skills</b>	Embedded Systems, (Non-)Relational Databases, Continuous Integration, Testing, Cloud Services, Scalability, RESTful APIs, Data Structures, Algorithms, Agile.
<b>Soft Skills</b>	Leadership, Communication, Autonomous-Learning, Teamwork.
<b>Spoken Languages</b>	French (native), English (C2), Spanish (C2), Catalan (A2).

## EDUCATION

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**Bachelor of Computer Science with Major in Computing | 240 ECTS**, *Universitat Politècnica de Catalunya* (2024)

Relevant Coursework: Quantum Computing/Cryptography ◇ Graphics ◇ Parallelism ◇ Artificial Intelligence

**Bachelor of Computer Science | Erasmus**, *University of Edinburgh* (2022)

Relevant Coursework: Advanced Robotics ◇ Machine Learning & Pattern Recognition

## EXPERIENCE

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**Junior FullStack developer** Jan 2023 Jan - Jul 2023  
SensingTex *Barcelona, Spain*

Utilising textile electronics to create medical solutions, I:

- Worked in a compact team using **Agile** methodologies to maintain and develop new features across the stack, mainly focusing on **microcontroller firmware**, **cloud services** and **web interfaces**.
- Designed and implemented new features and algorithms in time for the launch of a new product.
- Led the development of the microcontroller firmware re-work (**C++11**), unifying the codebase across products and improving maintainability.

**Software developer - internship** Jan 2022 - Aug 2022

Hewlett Packard & UPC *Barcelona, Spain* Worked on slicing software (C++17) for high end commercial SLS 3D printers:

- To support the new industry standard file format ".3mf", I worked with the in-house team and the **3MF consortium** to implement the new features
- Implemented triangle mesh optimization algorithms for the slicing process, reducing the slicing time for some meshes by 40%.
- Created unit tests and improved the benchmark system.

## PROJECTS & ACTIVITIES

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**Orienting Biochemical Reactions.** Worked on hypergraphs, specifically on the novel NP-hard problem of orienting hyper-edges minimizing external vertices, in the context of metabolic pathways. I created an [ILP model](#) using AMPL that obtains an optimized solution. This work was presented as my final thesis for my Bachelor and netted me a 9.1/10. All code and presentation material are found [here!](#).

**Hackathons** I participated in the 2023 HackUPC and won the first prize presented by Optiver. I also placed 2nd in the 2022 AdaHack in Edinburgh.

## MISCELLANEOUS ACHIEVEMENTS

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- Led study group for 10+ students in High School for 2 years and for 4+ students in University for 2 years.
- Created and moderated the main Discord server for my class in University.
- I skipped a grade in High School by passing the CE2D exam with the highest score in Belgium.