



Zambon Davide

Part-time MSc Computer Science Student at Ca' Foscari University
Part-time Software Developer (C++)

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About

I earned a **BSc in Computer Science** at Ca' Foscari University while working part-time as a **C++ software developer**.

My main role involves developing an **Autodesk Alias plugin** that integrates Radial Basis Function (RBF) morphing into the **industrial CAD workflow**, enabling rapid fluid-dynamics approximations.

I contributed to **backend development** and **database integration in Dart** at Bitcoin People, a startup redefining global payments through **Bitcoin** technology.

I participated in **CyberChallenge.IT**, a national **cybersecurity** competition, developing skills in **reverse engineering, cryptography, and attack/defense**. After qualifying via a CTF test, I competed nationally for the Ca' Foscari team.

Outside work, I build personal projects to deepen my knowledge of **low-level algorithms**, backend systems, and applied ML. I am proficient in **C/C++** (preferred), **Java**, **Python** (Flask, SQLAlchemy, Scikit-learn, Keras), **PostgreSQL**, and **Linux**.

I am passionate about growing as a software engineer, with interest in mid/low-level development, security, and emerging technologies like Bitcoin and AI.

Work Experience

-  ● **C++ Plugin Developer - RBF Morph**
November 2024 – Present | Full Remote
Developing a C++ plugin for Autodesk Alias to track geometry modifications, propagate mesh changes using RBF morphing, and estimate CFD result variations. This role has strengthened my C++ skills, Alias SDK usage, and computational geometry application. I have gained experience handling 3D data in CAD and use modern C++ libraries (Eigen, Nanoflann, Xatlas).
-  ● **Dart Backend Developer - Bitcoin People**
May 2025 - September 2025 | Full Remote
Backend development in Dart; Database management; code refactoring following ORM principles using Drift.
-  ● **Various Experiences during studies**
August 2020 - December 2024 | Venice
I have worked consistently alongside my studies since age 18, including 2 years in a supermarket and 6 months in fast food. The full list is available on my LinkedIn profile.

Education

-  ● **MSc: Cybersecurity and Software Development - Ca' Foscari University of Venice**
2025 – Present
Part-time student. Main topics: Software architecture and development methodologies; Software performance, scalability and correctness; System, Software and Internet Security; Cryptography; Formal methods for system verification; Applied probability; Quantum computing; Algorithms for massive data; Foundations of Machine Learning and AI; Functional programming languages.
- **BSc: Computer Science - Ca' Foscari University of Venice**
2022 – 2025. Final Grade: 106/110
Graduated in three years (106/110) while working part-time, maintaining a 27.8/30 exam average. Learned development best practices, cybersecurity fundamentals, computational theory, and algorithms.



● CyberChallenge Student and Finalist

February 2025 – July 2025

CINI national training program on offensive/defensive cybersecurity. Included theory, practical CTFs, and Attack/Defense exercises. Selected to represent Ca' Foscari in the national competition.



● BSc: Astronomy - University of Padua

2020 – 2022

Completed two years of study (Calculus 1/2, Algebra, Physics 1/2, Astronomy, Chemistry, Statistics) before transitioning to Computer Science.

● Astronomy stagist - University of Padua

2019

Participation in the "Il Cielo come Laboratorio" project: a theory course and practical internship at the Asiago Observatory (University of Padua) introducing astronomy research. Conducted analysis of star clusters.



● Secondary School

Liceo Scientifico Statale "U. Morin", Mestre (VE). Final Grade 98/100

Personal Projects

Huffman Compression Algorithm

Lossless data compression algorithm implemented in C++. Builds a frequency-based binary tree to assign variable-length codes, reducing data size. [Code on GitHub](#)

Json Parser

Json Parsing: creates manipulable data structures from JSON files. Implemented in C++. [Code on GitHub](#)

Problematic Internet Use - Machine Learning project

Project for Data and Web Mining course. Objective: Predict Problematic Internet Use (SII) using biological markers from the HBN study. Trained an XGBoost model and an ensemble (Random Forest + Neural Network). Tech: Python, pandas, numpy, scikit-learn, Keras, XGBoost. [Code on GitHub](#)

Ecommerce Concept

Simple e-commerce concept focused on the backend, built in Python using Flask, Flask-Login, PostgreSQL, and SQLAlchemy. [Code on GitHub](#)

BigInteger library

Prototype for an arbitrary-precision integer C++ implementation (development suspended). Implemented the Karatsuba algorithm for multiplication. [Code on GitHub](#)

Android App

Android app (concept similar to *subito.it*) for selling food near its expiration date, including an internal chat. No public code, available if requested

Hobbies

- Mountaineering
- Climbing
- Hiking

Languages and Drive licence

Languages: Italian (Native), English (Full professional proficiency), French (A1), Spanish (A1)

Driving Licence: B, AM. Car owner