Mirco De Zorzi April 4, 2002

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EDUCATION

• I.T.I.S J.F.Kennedy

Diploma in Information Technologies, Vote: 81/100

Pordenone, IT 2016 - 2021

• Ca'Foscari

Bachelors in Computer Science

VENICE, IT 2021 - present

Skills

- Languages: C++, C, Golang, Python, Lua, TypeScript, React, Vue
- Other Tools: AWS, MongoDB, ElasticSearch, Prometheus, SQL, Emacs
- Administrative Tools: Serverless, Ansible, Docker, Docker Compose, Git, Linux, *BSD
- Other Skills: Binary Reverse Engineering, Web API Reverse Engineering
- Natural Languages: : Italian (native), English (proficient), Slovakian (second language)

EXPERIENCE

• Technological Systems by Moro

Software Development

Azzano Decimo, Italy December 2020 - March 2021

• Development: Developed software components for remote monitoring based on a serverless architecture hosted on AWS.

Reverse Engineering and Software Development

June 2019 - August 2019

- **Development**: Developed software components for *simultaneous localization and mapping* and *automated guided vehicles* on the R.O.S. operating system; The core is written in C++ and frontend in Javascript.
- Reverse Engineering: Reverse Engineered stripped firmware for an STM32 microprocessor.

Advanced Algorithms Summer School

Course

Ca' Foscari University, Venice, Italy July 2019

Attended a week-long *advanced algorithms* course at San Servolo International College for students qualified at the 2019 National Olympiad of Informatics. The topics ranged from dynamic programming to greedy algorithms and graphs.

• Cyber Challenge 2019

Course

University of Padua and Pisa, Italy February 2019 - June 2019

Qualified at a national programming challenge organized by the *National Interuniversity Consortium for Informatics* at the University of Pisa and subsequently attended a 3 months long cybersecurity course at the University of Padua with topics such as: reverse engineering, pwning, web security, and cryptography. At the end of this course participated at a jeopardy CTF hosted by the organizers of the course.

PROJECTS

- sentry: High performance reverse proxy and load balancer written in C++ with Lua scripting support and a Vue frontend.
- pka2xml (github.com/mircodezorzi/pka2xml): Packet Tracer related tools obtained through reverse engineering.
- loki-cpp (github.com/mircodezorzi/loki-cpp): Modern C++ driver for Loki: a log aggregation system.
- tojson (github.com/mircodezorzi/tojson): Small library to convert between different data serialization formats.
- sigol (github.com/mircodezorzi/sigol): Go tool to automatically generate and deploy AWS Lambdas.
- hort (github.com/hort): Data hoarding and indexing framework written in modern C++.
- sym: Process scheduling and memory management simulator written in pure C.

CERTIFICATIONS

• Cisco IT Essentials, Cisco Introduction to Networks, and Cisco Cybersecurity Essentials

Additional Experience & Achievements

- Participate at Capture The Flag "hacking" competitions with Padua's NoPwnIntended and Italy's Mhackeroni teams.
- Participated at 3 national Rubik's cube competitions in Milan, Verona, and Bratislava (SK) with a personal best of 18.67 seconds.
- Won the M.I.U.R. prize at the *National Robotic Olympics* of 2019 with a remotely operated drone for environmental data collection, processing, and analysis. Presented the prototype at the Italian Ministry of Education in Rome during the National Day for the Environment.