

Gabriele Oliaro

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Education

HARVARD UNIVERSITY

B.S. Electrical Engineering. Minor in Computer Science. GPA 3.8

Cambridge, MA

May 2021

Relevant Coursework: Big Data Systems (grad) • Advanced Computer Networks (grad) • Operating Systems • Systems Programming and Machine Organization • Machine Learning • Probability • Discrete Math for CS • Linear Algebra • Multivariable Calculus • Signals and Systems • Feedback and Control • Circuits and Electronics • Quantum Physics • Econometrics.

ISTITUTO LEONE XIII

High School diploma in Classics. Final grade 100/100

Milan, Italy

July 2017

Main Coursework: Ancient Greek, Latin, History, Philosophy, Literature

VASHON ISLAND HIGH SCHOOL

Exchange Student. GPA 4.0

Seattle Area, WA

Sept. 2015 – July 2016

SAT Subject Tests: 800 (Math II), 800 (Physics), 800 (Latin)

Work and Research Experience

HARVARD SCHOOL OF ENGINEERING AND APPLIED SCIENCES

Cambridge, MA

Undergraduate Researcher

May 2019 – Present

- Undergraduate researcher in Prof. Eddie Kohler's group at Harvard. Collaborating with Prof. Minlan Yu and Prof. James Mickens.
- Work on the user-level networking stack for lightweight VMs virtualized at the runtime level
- Design and implement a multiclient HTTP server in Lua that can be migrated live without breaking TCP connections
- Write and debug large codebase in C, C++, Lua and Python.

Teaching Assistant

Aug. – Dec. 2018

- Teaching Assistant for Harvard's Introductory Computer Science course, CS50.
- Lead weekly 1h15min-sections to a group of ~20 students, hold office hours, grade problem sets and exams
- Contributed to hosting & organizing course-wide events such as the CS50 Puzzle Day, the CS50 Hackathon and CS50 Fair, where students showcase their final projects.

POLITECNICO DI MILANO

Milan, Italy

Research Assistant

May – Aug. 2018

- Research assistant with Prof. Andrea Bonarini of the Artificial Intelligence and Robotics Lab (AirLab)
- Worked on a research project that used state-of-the-art machine learning techniques to improve tracking of human people by a moving robot.
- Wrote Python implementation of an overlapping mixture of Gaussian Processes to generate human motion profiles from potential leg detections from sensors onboard a moving robot.

Select Projects

Chickadee

Jan – May 2019

- Designed and implemented a whole multi-core kernel as term-time project for CS 161 at Harvard
- Managed and debugged large codebase in C++ with synchronization
- Implemented virtual memory, buddy allocator, processes, threads, wait queues, file system, disk support, buffer cache, signals and system calls.

Let's Meet!

Nov. – Dec. 2018

- iOS app that enables users to instantly find people with whom they can study, eat lunch and do other activities – all without worrying about bothering people who don't happen to be available at the same time as you
- Designed front-end of the app in XCode and wrote code in Swift
- Set up the backend using a custom MySQL online database and a REST API written in PHP and SQL

SGAST (Series Graphing and Solving Tool)

Sept. – Dec. 2016

- Java app that helps high school and college students learn infinite series.
- Designed app in Eclipse, wrote code in Java.

Technical Skills

Programming Languages: C, C++, Python, Java, Mathematica, Matlab, PHP, Swift, LaTeX, Lua, Stata

Techniques: Data Structures, Algorithms, Debugging, Operating Systems, Computer Networking, MySQL, REST API, Git