Biscaccia Carrara Francesco

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francesco-biscaccia.github.io

Education

University of Padova **September 2023 – October 2025**

Master in Computer Engineer: High Performance and Big Data Computing (110L/110) *Padova, Italy*

University of Padova **September 2020 – 2023**

Bachelor in Computer Engineer (101/110) *Padova, Italy*

ITI Francesco Severi **September 2015 – May 2020**

Technical Diploma in Computer Science (100/100) *Padova, Italy*

Relevant Coursework

- Data Structures and Algorithm
- Artificial Intelligence
- Machine Learning
- Linear Programming
- Big Data Computing
- Parallel Computing
- Approximation Algorithm
- Computer Architecture
- Operative Systems

Experience

Web Designer **May 2019 – June 2019**

VISITSAVONLINNA.FI *Savonlinna, Finland*

- Worked as a Web Designer for VISITSAVONLINNA.FI, a tourism agency in Finland
- Enhanced proficiency in the WordPress framework for web development
- Gained experience in photography tailored for marketing purposes
- Letter of Reference

Junior Helpdesk Assistant **January 2019 – February 2019**

IBC SRL *Vigonza, Italy*

- Provided helpdesk support in a smart shopping environment
- Improved skills in Bash scripting and SQL
- Developed organizational abilities and teamwork skills

Achievements

Erasmus+ Project: SMART CAREERS PROMOTION **May 2019 – June 2019**

- Selected as the winner of the Erasmus+ project, "SMART CAREERS PROMOTION"
- Collaborated with Savonlinnan Travel in the Savonlinna region, hosted at SAMIedu Vocational College, Finland

Projects

Bitonic Sorting | *C, MPI, Python, VS Code* **August 2024**

- Implemented the Bitonic Sorting algorithm in C
- Utilized MPI (Message Passing Interface) for efficient data exchange across multiple processors in the CAPRI cluster
- Achieved scalable parallelized sorting with near-linear performance improvement
- GitHub Repository (github.com/Francesco-Biscaccia/BitonicSort)

TSP Solver | *C, MPI, Python, VS Code, IBM ILOG CPLEX* **March 2024 – July 2024**

- Developed multiple exact and approximate methods to solve the Traveling Salesman Problem (TSP)
- Conducted heuristic comparisons and parameter tuning for solution optimization
- Used IBM ILOG CPLEX to solve the TSP exactly and integrated it into Matheuristic approaches
- GitHub Repository (github.com/Francesco-Biscaccia/TSP_Solver)

Outlier Detection in Large Datasets | *Java, Apache Sparl, IntelliJ* **May 2024 – June 2024**

- Utilized Apache Spark and a Big Data MapReduce framework to detect outliers through k-center clustering techniques
- Designed and implemented sampling of frequent items from data streams
- Enhanced leadership and time-management skills through team collaboration
- GitHub Repository (github.com/Francesco-Biscaccia/BigData_Projects)

Skills

Programming Languages: C, C++, Java, Python, SQL, Javascript, R
Developer Tools: VS Code, Eclipse, IntelliJ
Technologies/Frameworks: Linux, GitHub, CMake, IBM ILOG CPLEX, SLURM, Apache Spark, MPI, Scikit-learn
Soft skills: Adaptability, Planning, Team working, Leadership, Critical thinking