MATILDE PICCOLI

Master student in Electronic and Electrical Engineering with expertise in Circuit Design, Robotics, and ML, looking for research opportunities.
Interest in Biomedical and NeuroEngineering applications.

Visit my **portfolio** at:
matilde_piccoli_portfolio

CONTACT

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SKILLS

System Verilog, Python, C++, Matlab, Linux, GitHub, CAD, HTML and CSS

AREAS OF EXPERIENCE

System Engineering • Robotics • Machine Learning
Digital Verification • Analogue Circuits Design • Biomedical Electronics
Embedded Systems • Object-oriented Programming • Team-working

EDUCATION

IMPERIAL COLLEGE LONDON (UK)
2019 - Present

MEng in Electronic and Electrical Engineering

- On track for **First Class Honors**, awarded Best Project of the Second Year.
- Main modules:
  - **Biomedical Electronics**, Analogue Integrated Systems.
  - **Robotic Manipulation** (Matlab, CAD), Embedded Systems (Python, C++).
  - **Machine Learning & Deep Learning** (Python), Artificial Intelligence (Algorithms, Prolog).
  - **Circuit & Systems Design** (Digital and Analogue Systems, FPGAs, PCB, Verilog).
  - **Control Engineering** (analysis and design of linear control systems, MATLAB).
  - Digital Electronics and Computer Architecture (CPU design).
- Member of the MedTech and Robotics Societies; student at the Imperial College Business School.

EXPERIENCE

APPLE (UK)
Mar 2021 – Present

GPU Design Verification Engineering – Placement

- Junior Design Verification Engineer role in the GPU team at Apple, responsible for the Verification of a unit withing the Apple GPU in an extremely time-sensitive environment.
- Extensive experience in Digital Design and Verification using Object-Oriented Programming (System Verilog and UVM Library); Developed analytical and team-working skills.

ARM (UK)
Mar 2021 - Jan 2022

Hardware Design Engineer - Undergraduate Role

- Junior System Engineer in the CPU team at Arm, world leading technology provider of processor IP.
- Successfully designed and verified an interface unit for the communication between processors, with memory system; developed technical specifications for consumer hardware projects; Received highly positive reviews from manager and colleagues for my quick progress in the project and my commitment to learning.

IMPERIAL COLLEGE LONDON (UK)
Jan - Apr 2022

Robotic Arm – Project

- Developed the kinematic model and motion controller (Matlab) for a Robotic Arm, to implement different tasks (moving and reorienting blocks, drawing, making sushi); designed (CAD) and 3D-printed multipurpose grippers and other task-specific tools; worked in a extremely time-pressured
- Achieved upper 1st class and highly positive feedback following the live demonstration.

IMPERIAL COLLEGE LONDON (UK)
Jan - Apr 2022

Aquapolis IoT System – Start-up Prototype

- Ideated and developed an IoT system able to identify the water quality, mapping and giving information of the sources and safety of water in the area; the 3d-printed portable device uses multiple sensors, Raspberry PI, encrypted communication, a ML model for the data analysis, and a user-friendly web-app (Flutter) to track the measurements and view the local sources of water.
- Achieved upper 1st class and highly positive feedback during the marketing presentation.

IMPERIAL COLLEGE LONDON (UK)
Jan - Apr 2022

Autonomous Mars Rover - Project

- Collaborated in an interdisciplinary project to implement an autonomous Rover detecting and mapping objects; Leading role in the implementation and testing process of the Drive System, comprehensive of movement and error correction algorithms and PID controller coded in C++ (Arduino, SMPS, motors based on the data collected by optical sensor and camera).
- Achieved upper 1st class individual mark and the award for Best Project of the Year

HOUSTON METHODIST CENTRE (US)
Jun 2018

Biomedical Research- Work Shadowing

- Selected for a competitive stage at one of the biggest centres for medical research in the world.
- Assisted at the development of innovative technology for the cure of cancer (remote-controlled drug delivery implants) and diagnostics' technologies; Developed research-oriented approach.