PIETRO MASSETANI

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SUMMARY

I am a mathematics postgraduate with expertise in optimization, programming, and data analysis. I am interested in solving complex problems and developing projects that combine theoretical knowledge with practical solutions. I aim to contribute to interesting projects while continuously learning and improving myself.

RELEVANT EXPERIENCE

Functional Safety Analyst, Cyres Consulting, Munich, Germany   Oct 2022 – Jun 2023

- Conducted functional safety analysis for 3+ automotive projects based on ISO 26262 standards, identifying and mitigating critical risks and failure modes.
- Implemented strategic integration of automotive cybersecurity measures.
- Created detailed safety plans, Hazard and Risk Assessments (HARA), and Failure Mode and Effects Analysis (FMEA) for automotive components.
- Collaborated closely with cross-functional teams to ensure compliance with safety requirements.

EDUCATION

M. Sc., Mathematics in Operations Research   Oct 2021 - Oct 2024
Technische Universität München
Relevant topics: Optimization, Game Theory, Machine Learning, Computer Science

B. Sc., Mathematics   Sep 2017 - May 2021
Università degli studi di Firenze
Relevant topics: Mathematical analysis, Algebra, Geometry, Numerical Analysis, Probability, Statistics

SELECTED PROJECTS

Algorithm Developer, Horyzn, Munich, Germany   Oct 2022 – May 2023
Designed and optimized aircraft geometry models using CPACS with TiGL and TiXi libraries, collaborating with a multidisciplinary team of 10 engineers to streamline design processes.

- Conducted simulations and aerodynamic analysis, improving aircraft performance metrics by 15% and identifying design optimizations to reduce drag.

Deformable Shape Correspondence with Coupled Functional Maps   Apr 2022 – Jul 2022
Collaborated in a team of four in a Case Study for the Chair for Computer Aided Medical Procedures and Augmented Reality.

- Utilized functional and coupled functional maps to recover point-to-point mappings between multiple shapes.
- Integrated coupled functional maps into deep learning frameworks using PyTorch.
- Conducted quantitative evaluations and comparisons with other state-of-the-art methods.

Optiver HackaTUM Challenge - 1st Place   Nov 2022

- Developed a bot for automatic market making and price arbitrage.
- Outperformed all other participants in the Hackathon challenge.

TECHNICAL SKILLS

Programming: Python, C++, MATLAB   **Optimization Tools:** Gurobi, CPLEX (beginner)
Collaboration & Version Control: Git

LANGUAGES

Italian: Native   **English:** Fluent   **German:** Basic