

Luca Mehl

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EDUCATION

Imperial College London – Master of Engineering in Computing 2020-2024

- Grade: Upper Second Class Honours; First Class Honours in final year
- Selected modules: Scalable Systems and Data, Distributed Systems, Computer Vision, Advanced Concurrency, Deep & Reinforcement Learning.

ICL Master's Thesis - Supervisors: Prof. Julie McCann & Dr. Michael Breza 2024

SyncWave: Rapid and Adaptive Decentralized Time Synchronization for Swarm Robotic Systems

- Designed a state-of-the-art decentralized time synchronization protocol for drone swarms (in RIOT-OS), for large, sparse, and rapidly changing network topologies in GPS-constrained environments
- Achieved state-of-the-art <1s convergence speeds with <10ms error in swarms of over 160 drones

International School of Geneva, Switzerland 2020

- IB Bilingual Diploma – English-French: 44/45
- HL: Math 7, Physics 7, Geography 7 | SL: Chemistry 7, English A 7, French A 6

SELECTED EXPERIENCE

Software Engineering Intern, Dojo, London UK Apr-Sep 2023

- Contributed to the development of a restaurant management system and consumer app with 100k+ weekly users, working closely with product managers and engineering teams.
- Re-architected backend services, turning several 1 hour on-call workflows into a 1s lookup, leveraging GCP (PubSub, storage, Kubernetes) to optimize performance, implementing a Golang backend + GraphQL API

Software Lead, Imperial College Karman Space Programme 2021-2023

- Led a 6-member software team in a 90-person project to launch the first student-designed reusable rocket to the Kármán line, featured by the BBC, *The Independent*, and *New Scientist*.
- Architected Mission Control and livestream networking for rocket launches in the Scottish Highlands and Mojave Desert, enabling live video and rocket telemetry for launch safety team & viewers worldwide.
- Coordinated with engineering teams and sponsors, refining mission-critical specs and driving solutions.

Imperial College ICHack Finalist: Real Impact Hack 2022

- Built an app as a team using Palantir Foundry to assess risk levels of housing zones in California using earthquake, flood, and wildfire data, and propose FEMA mitigation strategies.

MIT Beaver Works Summer Institute – UAS-SAR Program, Cambridge MA, USA 2019

- Selected for project-based course on Unmanned Autonomous Vehicle-mounted Synthetic Aperture Radar
- Placed first in final team competition to build a multicopter-mounted radar imaging system

PROJECTS

Cryptic Crossword Solver - Supervisor: Prof. Anthony Field 2023

- As a team of 7, built an interactive cryptic crossword-solving app in React Native with a Python/Haskell backend, including OCR for grid extraction from a photo, followed by syntactic and semantic clue solving

PintOS Operating System 2022

- Built a UNIX operating system in C, including MFQS scheduling, system calls, and virtual memory.

SKILLS & INTERESTS

- **Programming languages:** Python, Java, Golang, C
- **Platforms & Frameworks:** GCP, Kubernetes, GraphQL, React Native
- **Topics of Expertise:** Distributed systems, scalability, computer vision, concurrent systems
- **Languages:** English, French (fluent); Spanish (A2 level)
- **Other Interests:** Rock climbing, alternative music, caving, mountaineering