

CLAUDIO MONTANARI

854 West Fullerton Ave, RB Chicago, IL - +1 (312) 823-4908

[linkedin.com/in/claudio-montanari](https://www.linkedin.com/in/claudio-montanari) | c.montanari.95@gmail.com | github.com/claudioMontanari | medium.com/@c.montanari.95

WORK EXPERIENCE

AI Machine Learning Engineer, ELEVANCE HEALTH, Chicago, IL DEC 2020 - PRESENT

- Led Blockchain project for settling healthcare transactions on **GoQuorum**.
- Quantum Machine Learning using **Qiskit**, **PennyLane**, and **Jax** on IBM hardware.
- End-to-end solution medical claims from **Snowflake** to **Neo4J**: infrastructure, pipelines, indexes.
- Co-ownership of team infrastructure from Terraform to K8s (GitHub enterprise, KubeFlow, Argo, GoQuorum).
- Data pipelines for the **Asthma Digital Study** (Apple, University of California, Irvine).
- Launched Virtual Primary Care pilot to **Sydney Health** (10ML members), with ownership of several back-end layers (order management, pricing, benefits, identity, etc).

Software Engineer, WEPO INC., Chicago, IL MAR - DEC 2020

- Implemented back-end systems in NodeJS, Java Spring and Quarkus.
- Implemented data pipelines for scraping Facebook, Instagram and YouTube accounts.
- Deployed and monitored applications in Kubernetes and Grafana on Google Cloud Platform.

Graduate Research Assistant, UNIVERSITY OF ILLINOIS AT CHICAGO, Chicago, IL JAN 2019 - MAR 2020

- Profiled C State-Of-The-Art Delegation library up to Assembly level in a **NUMA** architecture.
- Implemented data and compute scalable solutions for Delegation.
- Automated profiling process in Linux environment.

SKILLS

LANGUAGES	Python, Java, C/C++, Javascript	PROFILING TOOLS	Perf, Valgrind, BPF
DATABASES	MySQL, Neo4J, MongoDB	FRAMEWORKS	Spring, FastAPI, NodeJS, React
CLOUD	Kubernetes, Terraform, AWS, GCP		

EDUCATION

Master in Global Business with Blockchain, UNIVERSITY OF THE CUMBERLANDS MAR 2023 - PRESENT

GPA: 4.0/4.0

Master of Science in Computer Science, UNIVERSITY OF ILLINOIS AT CHICAGO MAY 2020

GPA: 4.0/4.0

Master of Science in Computer Science and Engineering, POLITECNICO DI MILANO JUL 2020

Final Grade: 110/110 with Laude

Bachelor of Science in Engineering of Computing Systems, POLITECNICO DI MILANO SEP 2017

Final Grade: 106/110

ACADEMIC PROJECTS

Blockchain Development, UNIVERSITY OF THE CUMBERLANDS MAR - AUG 2023

- Implemented and deployed supply-chain applications on Hyperledger Fabric and Ethereum.

OO Programming: Smalltalk, C++ and Java, POLITECNICO DI MILANO 2017 - 2018

- Coded different toy projects both in **C++** and **Smalltalk**.
- Implemented a complex **online** multiplayer strategy game (Lorenzo il Magnifico) in **Java**.

Performance & Concurrent Computing, UNIVERSITY OF ILLINOIS AT CHICAGO SEP - DEC 2018

- Experimented performance impact of cache locality and **false sharing** in a multithreaded environment.
- Implemented and compared different **synchronization mechanisms** on a linked list (fine grain locking, hand-over-hand locking, RCU, CAS based lock free).
- Evaluated performance impact of inline **AVX2** instructions implementing assembly routines.

PUBLICATIONS

- Nilanjana Basu, Claudio Montanari, and Jakob Eriksson. *Frequent Background Polling on a Shared Thread, Using Light-Weight Compiler Interrupts*, pages 1249–1263. Association for Computing Machinery, New York, NY, USA, 2021

ACTIVITIES AND AWARDS

Mentor for Ph.D. students, ELEVANCE HEALTH 2021 - 2023

- Led on-boarding, code infrastructure and projects organization.
- Highly technical projects with core-business exponential impact (Blockchain and Quantum).

Qiskit Global Summer School, IBM JUL - AUG 2023

- Implemented quantum algorithms (teleportation, phase estimation).

IBM Quantum Spring Challenge, IBM MAY 2023

- Implemented phase estimation and error mitigation algorithms with dynamic circuits.

QHack, XANADU FEB 2023

- Implemented phase estimation and error mitigation algorithms.

Best overall team with the project "Feel Your City", CHICAGO MOBILITY HACKATHON NOV 2018