

Alessandro Hu

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EDUCATION

Polytechnic University of Milan

Milan, Italy

Master of Science in Mathematical Engineering (Quantum Eng. / Stat. Learning)

Expected Start: Sept. 2026

Polytechnic University of Milan

Milan, Italy

Bachelor of Engineering in Computer Engineering | GPA: 27.68/30

Expected Graduation: Sept. 2026

- **Relevant Coursework:** Probability Theory, Distributed Systems, Software Engineering, Foundations of AI, Computer Architecture and OS, Theory of Stochastic Processes, Thermodynamics, Circuit Theory.

TECHNICAL SKILLS

Programming: Go, Python, TypeScript, Java, C, C++, Swift

Cloud Native & Infra: Kubernetes, Helm, Docker, Observability, Distributed Tracing

Tools & OS: Linux (Arch), ROS2 (Robot Operating System), Git, Neovim, Bash

Math & AI: LLMs, Agentic Workflows, MCP (Model Context Protocol), Reinforcement Learning

OPEN SOURCE CONTRIBUTIONS

Jaeger ([jaegertracing/jaeger](#)) | *Go, Observability, Distributed Tracing*

July 2026

- Fixed a nil pointer panic in the `storage/v2/grpc` component by validating query parameters, directly contributing to the project's core storage stability.

Helm ([helm/helm](#)) | *Go, Cloud Native*

August 2026

- Implemented fallback parsing logic to support ASCII-armored bare public keys for plugin verification (`--keyring`), bypassing binary GPG restrictions for CI/CD environments.
- Implemented Azure CDN invalidation logic and endpoints for the official Helm project infrastructure.

Kubernetes ([kubernetes/website](#)) | *Infrastructure, Documentation*

August 2026

- Resolved macOS support documentation issues for reference-docs generation, collaborating directly with Kubernetes SIG-Docs maintainers.

KubeStellar ([kubestellar/kubestellar](#)) | *Go, Kubernetes, OCM*

July 2026

- Implemented ConditionRules to prevent infinite Job TTL recreate loops via Open Cluster Management (OCM) ManifestWork.

Keycloak ([keycloak/keycloak](#)) | *Java, IAM*

August 2026

- Resolved a 500 Internal Server Error in the Admin API by gracefully handling disabled EmailSenderProviders during SMTP validation.

PROJECTS & RESEARCH

Serverless Autoscaling with Reinforcement Learning

- Researched and applied Reinforcement Learning (RL) algorithms to optimize cloud-native serverless function autoscaling, replacing static thresholds with dynamic, AI-driven scaling policies.

Robotics & ROS2 Automation

- Implemented odometry calculation, mapping, and localization algorithms for an omnidirectional robot by processing asynchronous sensor streams and rosbag data.

AWARDS & INITIATIVES

Hackathon (BiblioHackDay) | *3rd Place Overall & Best Project Award*

May 2024

- Achieved third overall place in a team of 3 by building a 2D Python videogame. Won the award for the “Most Appreciated Project” voted by the participants.