

MICHELE DE CILLIS

Software Engineer

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EXPERIENCE

Research Intern

NERDS Lab @ ITU

📅 Sep 2025 – Dec 2025

📍 Copenhagen, DK

Conducted bachelor's thesis research on measuring polarization in large-scale directed social networks during an Erasmus traineeship, including a literature review across social media analysis, network polarization, and network science. Stack: Python, NumPy, PyTorch, Pandas.

- Measured polarization on directed networks by applying the Magnetic Laplacian – the **first use in this context**
- Adapted an HPC pipeline over the **entire historical Reddit dataset** to build directed instead of undirected networks
- Validated results against theoretical toy-network models, reaching a **0.65 average correlation**
- Earned the **highest thesis grade (7/7)**. Read [here](#)

Co-founder

Polyneta

📅 Apr 2025 – Dec 2025

📍 Remote

Co-founded a startup connecting companies that sell to municipalities to simplify direct-award procurement, running customer discovery and building the early product with AI-accelerated development.

- Built the alpha (pre-MVP) aggregating company services for municipalities, using AI to accelerate development
- Prototyped a scraping, RAG, and OCR pipeline to extract structured data from disorganized public-sector PDFs
- Ran customer discovery through **3-5 exploratory interviews** and Mom Test surveys
- Pitched at the FondazioneUniMi incubator, backed by extensive market research

Front-End Engineer

Pane&Design (PED, part of humanvsmachine.co)

📅 Oct 2021 – Dec 2022

📍 Milan, IT

Built and optimized high-traffic e-commerce sites and internal telemedicine tools for a Fortune 500 client at a digital consulting agency, using React, TypeScript, styled-components, Tailwind, and Material UI.

- Cut re-renders and load times by **perceived 50%** on a high-traffic e-commerce site (**100k monthly visits**) via microservices with dynamic JS loading
- Built a telemedicine tool for the client's ophthalmologists, unifying a multi-section medical history form into a single-page flow with react-jsonschema-form
- Managed one developer through task assignment and code review
- Contributed to further high-traffic client sites (**up to 200k monthly visits**) and to the agency's own website

SKILLS

Language and Tools - TypeScript

JavaScript HTML/CSS GraphQL

PostgreSQL Python Nix Git Bash

Linux Docker Figma Typst LaTeX

Frameworks and Libraries - React

React Native TanStack Query Node.js

NumPy DuckDB PyTorch Matplotlib

scikit-learn

LANGUAGES

Italian Native speaker

English C1 Advanced

French B1

Spanish B1

EDUCATION

BSc Computer Science

Università degli Studi di Milano

📅 Sep 2022 – Apr 2026

Calculus Linear Algebra Physics

Data Structures and Algorithms

Erasmus+ Exchange Program

Université Paris-Saclay

📅 Sep 2023 – Jun 2024

Bio Informatics Machine Learning & NLP

Linear Programming

CERTIFICATIONS

Cambridge C1 Advanced · 📅 26 Mar 2026

Full-Stack Engineer

Online Impresa (part of areaweb.org)

📅 Jul 2020 – Sep 2021

📍 Bari, IT

Sole developer at a small software agency serving SMEs, building the company's flagship mobile app platform from scratch with TypeScript, React Native, GraphQL, and Expo, and working directly with clients on requirements.

- Cut app deployment **from 1 hour to 15 minutes** by building a tool that clones the template repo, loads client specs, and builds with Expo
- Built the company's flagship app from scratch as sole developer with TypeScript, React Native, GraphQL, and Expo; shipped to the Play Store and App Store
- Delivered **100 client apps**, gathering and implementing requirements directly with clients
- Built internal tools, including a WhatsApp bot posting every closed order to a live office dashboard

PROJECTS

Open Source Contributions

📅 2025 – Present

- Usability bugfixes (mainly state sync) in [Pixelfed](#) (+7k stars, React Native)
- Improved the Italian translation in [Ghost Blog](#) (+54k stars)
- Ported and maintaining a package in [nixpkgs](#) (+25k stars, Nix language)

Personal Homelab

Self-host personal services (Nextcloud, Immich, and more) on a VPS with `NixOS`, using reproducible configuration-as-code to add services and their infrastructure (backups, `nginx`) quickly, with the same config shared across devices. Uses `Tailscale` for VPN, `nginx` as a reverse proxy, and daily `BorgBase` backups.

📅 Mar 2025 – Present

ALS Biomarker Identification

Analyzed RNA-Seq data and developed a model that generalizes with 90% accuracy for the ALS group. Authored comprehensive documentation of a workflow to identify potential biomarkers.

📅 May 2024 – May 2024

ACCOMPLISHMENTS

Top-Percentile Academic Ranking

University of Milan

📅 2024/25

Ranked in the top 20% for academic performance and the top 15% for graduation grade within the reference academic year.

First Place

University Startup Challenge

📅 2025

Won first place as a team of 4 by conducting market research, gathering early feedback, and building the pitch, landing page, and Figma prototype for what became Polyneta.

Silicon Valley Study Tour

📅 Aug 2025

Selected for a competitive program visiting leading companies and universities (Cisco, Apple, Google, LinkedIn, Electronic Arts, PureStorage, Sysdig, Zoox, Stanford, Berkeley), attending keynotes from their teams and building connections.