

MICHELE DINELLI

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EDUCATION

University of Bologna Sep 2023 - Current
MSc - Computer Science Bologna, Italy

- **Relevant Coursework:** Context-Aware Systems, Artificial Intelligence, Computational Math, Computer Graphics, Digital Forensics, UI/UX, Databases, Computer Science education, Cryptography, Deep Learning, Scalable and Cloud Programming, Emerging Programming Paradigms, Introduction to Quantum Computing, Internet Of Things.

University of Bologna Sep 2019 - Mar 2023
Bachelor's Degree - Computer Science for Management Bologna, Italy

- **Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Internet Programming, Databases, Numerical Statistic, Numerical Methods for Calculation, Mathematical Analysis, Linear Algebra, Internet Architecture, Web Technologies.

EXPERIENCE

Cubbit Sep 2024 - Current
Software Developer - Backend - Internship Bologna, Italy

- I develop a microservice using Go.
- The microservice dispatch events acting as a webhook dispatcher. The events are processed asynchronously using Kafka and storing data in a relational database.

Cineca Nov 2022 - Nov 2023
Software Developer - Backend - Full time Casalecchio di Reno (Bologna), Italy

- I am responsible for the maintenance and development of microservices orchestrated in a Kubernetes cluster in the enterprise cloud.
- My main duties include developing new features for existing microservices, resolving customer tickets, and participating in the development of new microservices from scratch.
- I use the Spring framework to create Java back-end services with a focus on performance while managing a multi-tenant infrastructure with various integrations with Oracle and MySQL databases, as well as other microservices APIs.
- I work following the agile model, participating in sprint planning and collaborating closely with colleagues in the development team and the product owner.

Finmatica Jan 2022 - Jun 2022
Software Developer - Backend - Internship Bologna, Italy

- I use Spring framework to write a scheduled task that retrieves data from an API and updates a PostgreSQL database with statistics on electric car recharge stations in Bologna.

ACADEMIC CAREER

University of Bologna Oct 2024 - Current
Research fellow - Statistical data analysis for urban mobility Bologna, Italy

- Create a data evaluation system capable of anticipating, detecting anomalies, and performing category analyses on temporal series.

University of Bologna Dec 2023 - Current
Tutor - Computer Science Bachelor's degree Bologna, Italy

- Tutoring Computer Science Bachelor's degree.

University of Bologna

Feb 2024 - Sep 2024

Teaching tutor - *Algorithms and Data Structures*

Bologna, Italy




- I tutor the Algorithms and Data Structures course for second-year students in the Computer Science for Management degree program.
- I lead face-to-face lectures, delivering both theoretical lessons and practical exercises when the professor is unavailable.
- I evaluate students' exam projects and assist in oral examinations.

RECENT PROJECTS

Where I wrote this

Jul 2024 - Sep 2024




WebGL, JavaScript, GLSL

- A replica of my room in 3D built with WebGL (GLSL) and JavaScript.
- It uses 3D meshes made with Blender and GLSL code running the graphics pipeline directly on the GPU.
- Code available on [GitHub](#) .
- Read the [documentation](#) .
- See it [live](#) .

Wifind

Jun 2024


Python, Radio fingerprinting

- Radio finger-printing tool published as command line interface (CLI) application.
- Uses radio signals to perform indoor localization.
- Used in a larger project called Authorized Area Safeguard, which is an Indoor Positioning System (IPS) designed for a university course (Context Aware Systems).
- Code available on [GitHub](#) .
- Read the [documentation](#) .
- [Pypi release](#) .

Mathematica word embeddings

May 2024




Wolfram Mathematica, Word2Vec

- Mathematica package written in Wolfram Language. It aims to explain what word embeddings using a 3D plot and a little game.
- Uses Word2Vec, a neural network which represents words as vectors. Vectors are used to represent words in a n-dimensional space.
- Code available on [GitHub](#) .

Aculei

Dec 2023



Python, Machine Learning, Zero-shot image classification, Optical character recognition

- Data extraction from a large dataset of photo-traps (~30GB).
- Analyzed data using unsupervised learning and zero shot image classification.
- The information obtained from photographs, the relationships and hidden patterns that are identified by artificial intelligence are used to generate an interactive experience within a photographic archive called aculei.
- Code available on [GitHub](#) .
- See it [live](#) .
- Read the [documentation](#) .

IBD and IBS Sentiment Analysis

Jan 2023

Python, BERT, Vader, Sentiment Analysis, Reddit APIs

- Bachelor's thesis work.
- The project's purpose is to determine if there is a link between user sentiment recorded in subreddits about inflammatory bowel disease (IBD) and irritable bowel syndrome (IBS) and COVID-19.
- Published on [AMSLaurea](#) .
- Code available on [Github](#) .

TECHNICAL SKILLS

My core languages: Java, Python

Other languages: Go, JavaScript/TypeScript, Dart

Frameworks/Libraries: Spring, Flask, Express.js, React.js, Flutter, WebGL

Databases: MySQL, Oracle, PostgreSQL, PostGIS, MongoDB

Infrastructure: Docker, Kubernetes, Minikube, GitOps

Operating systems: Unix based operating systems, Linux (Ubuntu), macOS

Other skills: \LaTeX , Hugo

INTERESTS

Chess: I'm quite decent and I love playing.

Manga: especially One Piece.

Guitar: I love music in general. Big fan of RHCP and John Frusciante. I am a guitar apprentice.

Sports: I used to play football (12 years), now I am more into gymnastic and running.

LANGUAGES

Italian: Native or bilingual proficiency

English: Professional working proficiency

German: Limited working proficiency

Spanish: Limited working proficiency