MICHELE RIGHI

Computer Engineer Graduate with 9+ years of experience in coding and software engineering. I'm passionate about open source and game development, proficient in a variety of libraries and frameworks, and I love learning new stuff. In my free time I enjoy developing projects and publish them on GitHub.

CONTACT

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- in Michele Righi
- @mikyll98

SKILLS

Programming
- C ●●●●●
- Java ●●●●●
- SQL ●●●●○
- Bash ●●●●○
- HTML/CSS ●●●●○
- JavaScript ●●●○○
- C# ●●●○○
- Dart ●●●●○
- Python ●●●○○
- C++ ●●●○○
- Go ●●●○○
- Kotlin ●●●○○
- Prolog ●●○○○

Operating Systems
- Windows ●●●●●
- Linux ●●●●○

Software, Frameworks & Tools
- Flutter ●●●●●
- JavaFX ●●●●●
- SDL2 ●●●●●
- Unity ●●●●○
- Blender ●●●○○
- Git,GitHub ●●●●○
- Gradle ●●●○○
- Docker ●●●●○
- Kubernetes ●●●●○
- Microsoft Azure ●●●○○
- Microsoft 365 ●●●●○

Languages
- Italian ●●●●●
- English ●●●●○
- French ●●○○○

CERTIFICATES

IELTS Academic 7.0
Unity Essentials
DataCamp Python Fundamentals

🎓 EDUCATION

📅 2021/09 - 2024/03
📍 Alma Mater Studiorum, University of Bologna, Italy

Master of Computer Engineering

Thesis: "Evolving and Scaling Enterprise Business Applications and Middleware based on Microservices: the SCM Use Case". Final grade: 110L/110

📅 2017/09 - 2021/03
📍 Alma Mater Studiorum, University of Bologna, Italy

Bachelor of Computer Engineering

Thesis: "Design of Applications and Multiplayer Games on Unity DOTS Architecture". 91/110

⚙ WORK HISTORY

📅 2024/09 - present
📍 SCM Group SpA - Rimini, Italia

DevOps Engineer

API management, Kubernetes, Docker, Google Cloud, automation, integration, CI/CD, DevOps.

📅 2023/10 - 2024/08
📍 SCM Group SpA - Rimini, Italy

Full Stack Intern

Microservices and API management: migration of the API gateway for the IoT platform.

💻 PROJECTS HIGHLIGHTS

📅 2022/10 - present
📄 Innovation and Project Management M

Pack-a-Punch: **Moddy**

Moddy is a modular packaging box born to meet the needs of the distribution of humanitarian aid. Its modules can be broken down to create objects for various (re)uses.

📅 2022/08 - 2023/04
📄 Software Systems Engineering M

Team BCR: **WasteService**

WasteService is a distributed and heterogeneous system for a differentiated waste-disposal service. We worked in a team of 3, following Scrum Agile methodology.
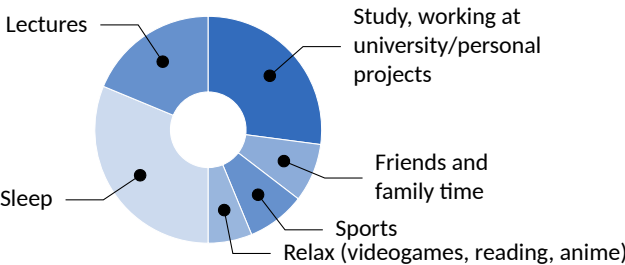
ACHIEVEMENTS, HONOURS AND AWARDS

- 🏆 Our project Moddy won (classified 1st out of 14) the **Innovation and Project Management Competition 2022**
- 🏆 Our project Moddy was selected (classified 19th out of 97 emerging ideas) for the **Call for Startup 2023**

GENERAL SKILLS

| Problem solving | Creativity | Eye for detail | Teamwork | Agile scrum |

| Design patterns | Design principles | DevOps |

A COMMON DAY OF MY LIFE

Lectures • Study, working at university/personal projects • Friends and family time • Sports • Relax (videogames, reading, anime) • Sleep

# ALL PROJECTS

Personal Website

📅 2024/04 - present
⌭ Repository GitHub
🔗 mikyll.github.io

mikyll.github.io is a static website, developed using Hugo and hugo-theme-hello-friend-ng theme, which I then extended and customized. It uses Git Submodules and GitHub Actions to publish only a specific part of content and **keep drafts private**, and it's hosted for free on GitHub Pages.

| Static Website | GitHub Actions | GitHub Pages | CI/CD |
| Hugo | HTML | CSS | JavaScript | Go Templates |
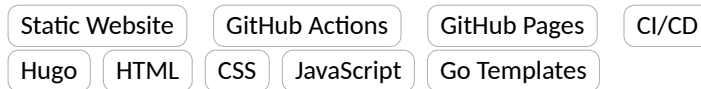
SCM API Gateway MSc Thesis

📅 2023/10 - 2024/03
📓 Mobile Systems M
🔗 SCM Digital Services

Selection, configuration and migration of the **API gateway** of SCM Group's IoT platform. This platform provides digital services to monitor and analyze data collected from SCM machines. I carried out this project as part of my internship, mentored by senior colleagues and infrastructure/domain experts.

| API Management | Microservices | IoT | Google Cloud |
| Kubernetes | Docker | Jenkins | ArgoCD |
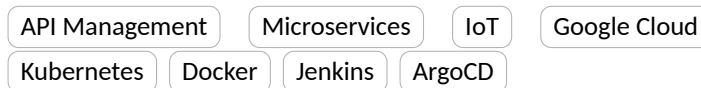
Computer Graphics Lab

📅 2023/03 - 2023/10
📓 Principles Of Computer Graphics M
⌭ GitHub Repository

7 projects covering various fundamental aspects of **computer graphics**, both 2D and 3D, carried out in preparation for the Computer Graphics Fundamentals exam.
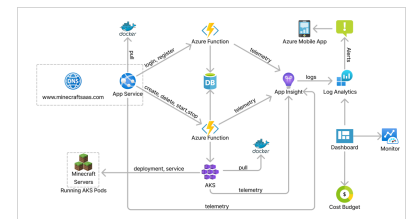

| Computer Graphics | Pipeline-Based Rendering | Ray-Tracing |
| C/C++ | OpenGL | Blender |
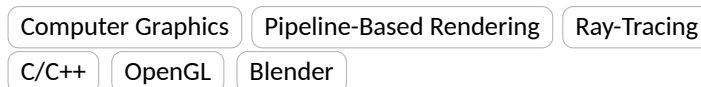
Minecraft SaaS

📅 2023/05 - 2023/07
📓 Scalable and Reliable Services M
⌭ GitHub Repository

Minecraft Software as a Service (SaaS) is a cloud-based hosting service for Minecraft servers, powered by **Microsoft Azure** and **Kubernetes**.

| Scalability | Reliability | DevSecOps | Microservices |
| Microsoft Azure | Kubernetes | C# | ASP.NET | Next.js |

Punchline!

📅 2023/04 - 2023/05
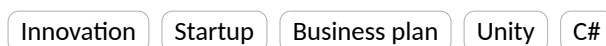⌭ GitHub Repository
🔗 LudumDare 53 entry

Punchline! is a game about an amateur comedian that tries to tell his best joke (delivery of a punchline) while dealing with a particularly difficult audience. We made it for the *LudumDare53* game jam, in **72 hours**, about the theme "delivery", and we used only **assets made by our team**.

| Game jam | Blender | Unity | C# |

Pack-a-Punch: Moddy

📅 2022/10 - present
📓 Innovation and Project Management M
⌭ GitHub Repository
🔗 LinkTree

Moddy is a modular packaging box born to meet the needs of the distribution of humanitarian aid. Its modules can be broken down to create utility objects, making the box **reusable**. The project includes a prototype of an application used to build boxes and track inventory.

| Innovation | Startup | Business plan | Unity | C# |

Team BCR: WasteService

📅 2022/08 - 2023/04
📓 Software Systems Engineering M
🐙 GitHub Repository
🔗 Demo Video

WasteService is a **distributed and heterogeneous system** for a differentiated waste-disposal service.

[Agile SCRUM] [Domain Specific Languages] [Raspberry Pi4] [Design Patterns] [Design Principles] [Java] [Spring Boot] [JavaFX] [Kotlin] [Flutter] [Python] [C] [MQTT] [CoAP]

Poké-Pi-Dex

📅 2021/07 - 2021/12
📓 Digital Systems M
🐙 GitHub Repository
🔗 Presentation Video

Poké-Pi-Dex is device that emulates a Pokédex: it can classify Pokémon from the first generation through a picture. It runs on a **Raspberry Pi4** with a **picamera** and other components attached, and we also made a fancy cardboard case to fit it in.

[Deep learning] [Computer vision] [CNN] [Raspberry Pi4] [Python] [Keras] [OpenCV] [Tensorflow] [Tkinter]

Gionnino9000: Tavoletta

📅 2022/04 - 2022/05
📓 Foundations Of Artificial Intelligence M
🐙 GitHub Repository

Tavoletta is an AI player that can play the boardgame *Tablut* with *Ashton's rules*. We implemeneted it for the AI Tablut Challenge 2022.

[Java] [Artificial Intelligence] [MinMax] [Alpha-Beta pruning] [Iterative deepening]

Tablut GUI Client

📅 2022/12 - 2022/12
🐙 GitHub Repository

Tablut GUI Client is a **JavaFX** application to play the boardgame Tablut using a graphical interface. The project was made as an extension to the program provided by the professor, which only had the CLI version.

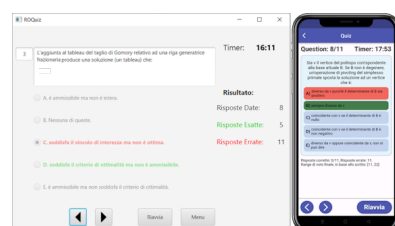[Java] [JavaFX] [Multiplayer] [TCP] [Client-server]

ROQuiz

📅 2021/07 - present
📓 Operations Research M
🐙 GitHub Repository

ROQuiz is a graphical quiz application I made to help me and my university colleagues revising the theory of the course *Operations Research M*.

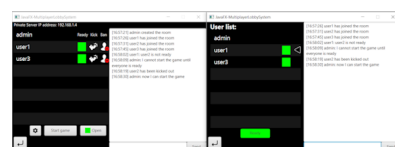[Java] [JavaFX] [Flutter] [Dart] [900+ downloads]

JFX Multiplayer Lobby System

📅 2021/08 - 2022/09
🐙 GitHub Repository

JavaFX Multiplayer Lobby System is a **JavaFX** application that allows users to create and join lobbies, through **TCP sockets** and **multithreading**. I made it in order to implement the multiplayer gamemode in Cluedo.

[Java] [JavaFX] [Multiplayer] [TCP] [Multithreading]

SDL2 Controller Tester

📅 2021/06 - 2021/06
🐙 GitHub Repository
🔗 Demo Video

SDL2 Controller Tester is a small CLI application I made to test my PlayStation3 controller. It can test any controller that the system recognize and logs its various inputs (connection and disconnection included) and haptic vibration.

[C] [SDL2]

Unity DOTS
BSc Thesis

📅 2020/11 - 2021/03

📓 Web Technologies T

○ GitHub Repository

Project I made for my BSc degree thesis about **Unity Data-Oriented Technology Stack** (DOTS) architecture. The goal was to analyze the new data-oriented layout provided by the ECS model and create a multiplayer game prototype based on DOTS.

[Unity DOTS] [C#] [Data-oriented] [ECS model] [Netcode]

Cluedo

📅 2020/04 - 2020/06

📓 Software Engineering T

○ GitHub Repository

Cluedo is a prototype of a graphical application to play the boardgame Cluedo. Given the limited time, we didn't complete the gameplay part, which was left with basic functionalities to show a demo play.

[Java] [JavaFX] [MVC pattern] [Waterfall model] [UML]