

# Marius Brouty

Student in third year of *Bachelor's in Computer Science* at Montpellier University. I'm currently honing my skills at lopole as a Full Stack developer.

Portfolio ↗    LinkedIn ↗    Github ↗

## Informations

Birthday	08 / 06 / 2003
Mail	marius.brt.contact@gmail.com
Location	Lyon and Montpellier

## Skills

♦ Python	♦ PyTorch	♦ NumPy
♦ TensorFlow	♦ Scikit-learn	♦ R
♦ Pandas	♦ Node.js	♦ SQL
♦ React	♦ Docker	♦ Git

## Work Experience



### lopole

Sep 2024 - Present

Fullstack Developer - Work-Study

Developed an AI chatbot using LLM and RAG to inform clients about the 2026 billing reform. Created a tool for generating and validating invoices with a sandbox API for real-time event visualization. Built an admin panel for managing Keycloak users, scheduling cron jobs, and handling PostgreSQL database schemas.



### Kokodi

Nov 2024

Backend Performance Engineer - Freelance

Improved performance and scalability of a Next.js/MongoDB application, growing user base from 90k to 260k. Implemented Redis caching for expensive resources and optimized frequent database writes. Developed a Write Behind system with multithreading and bulk requests, reducing MongoDB load. Addressed scalability, reliability, and database access optimization



### lopole

Apr 2024 - July 2024

Fullstack Developer - Internship

Developed a monitoring tool for electronic invoices and EDI messages. Designed the frontend with React and the backend with Express using TypeScript. Integrated PostgreSQL, Kafka, and Socket.io for real-time notifications. Dockerized the application and deployed it on Kubernetes for scalability and resilience.

# Education



## Harvard Data Science certification

March 2025

Machine Learning

R Language

KNN

Cross Validation

Random Forest

Linear Regression



## University of Montpellier

2022 - 2025

Bachelor's in Computer Science



## Blaise Pascal High School

2018 - 2021

Technical High School Diploma in Industrial Sciences and Sustainable Development.

# Projects

March 2025

## Analyzing Bakery Sales Patterns and Forecasting Demand

This study examines bakery sales data to understand consumer habits, price trends, and sales predictions using machine learning.

TensorFlow

Python

Machine Learning

Clustering

LSTM

[Read related article →](#)

February 2025

## Pace Copilot

A tool to generate personalized training plans using AI.

Next.js

AI SDK

PostgreSQL

[Read related article →](#)

November 2024

## Maximizing Database Performance with Write-Behind Caching

Enhancing database efficiency under heavy write loads using a write-behind caching strategy for improved scalability and performance.

Next.js

PostgreSQL

Redis

[Read related article →](#)

September 2024 → Present

## Iopole Lab

A platform to test the Iopole API, track invoice flows, generate invoices, and validate their format.

React

PostgreSQL

Keycloak

Kafka

[Read related article →](#)