Emile Le Gallic

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I am actively seeking an internship opportunity in Europe for the summer of 2024. My interests and expertise lie in software development, cloud computing, distributed systems, data applications, and artificial intelligence. With a solid foundation in Computer Science and programming. I'm fluent in English.

Education

M.Eng in Computer Science - GPA 4.0 — **Since September 2022**
2nd ranked engineering school in France — Télécom Paris - Institut Polytechnique de Paris
Specialization in Machine Intelligence and Data Management Systems

Preparatory classes "Classes préparatoires aux Grandes Écoles" - GPA 4.0 — **Sep. 2020 – July 2022**
Intensive program preparing for french national competitive exams for engineering schools — Lyéee Pierre de Fermat, Toulouse
Classes in math, physics and computer science

Work experience

SEDOO (CNRS) — **July 2023 – August 2023**
Software Engineer Intern — *Toulouse, France*

- Enhanced the systems for sharing scientific data related to planetary observations conducted by CNRS laboratories.
- Developed a web interface using VueJS for researchers to showcase metadata of their research.
- Designed and implemented a robust backend service in Java to manage data requests, automated email notifications to researchers, and facilitated seamless data uploads via FTP.
- Implemented an automated file management system, ensuring efficient storage and maintain data integrity.

School's Junior Enterprise (Télécom Étude) — **2022 - 2023**
Freelance software engineer, serving professional clients — *Paris, France*

- Developed a web application for organic waste retrieval, featuring data visualization through graphs and maps, with user role-based access management. Used Angular, Leaflet, and Plotly for the front-end. (5-months mission)
- Worked on a startup's sleep apnea analysis solution, integrating Python data processing scripts into an Django-based application. Employed tools for temporal data visualization and health metrics analysis with Plotly. (3-months mission)

Relevant projects / Research work

Paris catacombs LiDAR scan and visualization app | *ThreeJS, Vite, CloudCompare* — **June 2023**

- School group project focused on LiDAR technology integration in recent smartphone generations for achieving 3D scanning using an iPhone, followed by subsequent data processing.
- Engaged in advanced point clouds processing and mesh alignment techniques coupled with deep learning methods.
- I developed a comprehensive 3D visualization web application to showcase our own scans of the Paris catacombs.
- Links : https://emile.le-gallic.com/catacombs/ | https://github.com/Minifixio/catacombs-scan

Research project in computational geometry | *Python* — **November 2021 - May 2022**

- Aimed at optimizing the arrangement of toxic product silos on agricultural land, employing techniques including Voronoi diagrams and the Fortune algorithm.
- Conducted an extensive review of the current state-of-the-art literature, including reading relevant research papers, to inform and address the research objectives effectively.
- Link : https://github.com/Minifixio/TIPE_2021

Highlit : highlights of e-sport matches | *NodeJS, Angular, Docker* — **2020**

- A web application that automatically downloads, processes, and analyzes demo files of professional esports matches in Counter-Strike: Global Offensive (CS:GO).
- It extracts essential gameplay actions, correlates them with Twitch streams, streamlines analysis, enhances esports data insights, and enables users to review significant highlights using a video player.
- Link : https://github.com/Minifixio/Highlit

Virtual classroom assistant | *Python, NodeJS, Puppeteer, Selenium, Angular* — **May 2020**

- During lockdown, I created a BOT that could control a virtual user within the virtual classroom environment allowing users to perform tasks within the chat that were not natively supported by the app, such as drawing figures, using translation and maths tools, playing sounds or recordings...
- Implemented a web interface for controlling the BOT, which could be deployed locally.
- Link : https://github.com/Minifixio/blackboard-collab-bot

Co-Emplettes App | *React Native, TypeScript, MariaDB* — **November 2022 - May 2023**

- One year group project on a mobile app facilitating campus-based group shopping coordination for students.
- Developed the whole mobile application using React Native
- Led backend development, creating API routes, implementing OAuth authentication from scratch with tokens, integrating MariaDB, and deploying on a remote server.
- Link : https://github.com/Minifixio/coemplettes

Many other open-source projects — **Since 2014**

- Early contributor to PocketMine, developed PHP plugins, launched one of France's first Minecraft PE servers.
- Created an npm package for analyzing comment activities in Twitch streams.
- Many other projects are on my GitHub

Achievements and awards

Laureate of the national contest "Innovez" for Science&Vie Junior **May 2020**

- National programming competition for innovative ideas.
- Developed a smart glove with Arduino and heart rate sensors, connected via Bluetooth to a mobile app. The app, syncing heart rate data with music tempos, dynamically adjusted playlist music tempo during physical activities.
- I also filed a patent for it and presented the project at various conventions.
- Explanations : Video | Glove : GitHub | App : GitHub

Volunteering / Activities

Speaker at the Sciences&Vie Junior booth **November 2019**
Speaker *MakerFaire, Paris*

- Speaker at the "Innovate" booth of Sciences&Vie Junior at the Maker Faire Paris held at the Cité des sciences.
- Public demonstration of my award-winning "Sportify" project as part of the "Innovez" competition.
- Former winner actively involved in events encouraging younger generations to participate in the competition.

Capitole du libre (Open Source Software Summit) **2017 - 2018**
Volunteer Staff *ENSEEIHT, Toulouse*

- Weekend dedicated to Open Source softwares through around 100 conferences, 25 workshops for experts and the general public. The event welcomed 1,500 participants.

Télécom Gaming Club **2023**
Member of the staff *Télécom Paris*

- Member of the school's gaming club, actively involved in organizing LAN parties and other gaming-related events

Technical Skills

Languages: Python, Java, TypeScript, C/C++, HTML/CSS, JavaScript, SQL, OCaml
Developer Tools: Linux, VS Code, Eclipse, Android Studio, DataGrip, Qt Creator
Technologies/Frameworks: NodeJS, ExpressJS, Django, Scipy, sklearn, Tensorflow, Docker, MariaDB, MongoDB, neo4j, PostgreSQL, Angular, React, React Native, VueJS, Ionic, Qt, Jupyter, Git, WordPress