

# Tom EFFERNELLI

Portfolio: [tom-effernelli.vercel.app](https://tom-effernelli.vercel.app)

Github: [github.com/tom-effernelli](https://github.com/tom-effernelli)

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## Education

### Telecom Paris, Polytechnic Institute of Paris | *Grande Ecole Engineering Diploma*

Paris, FR | 2024 – 2027

- One of France's most prestigious general engineering schools in the Grandes Ecoles system. Equivalent to a top-tier university specialized in engineering studies.
- Specialized in Data Science & AI and Cybersecurity: Statistical Learning, Deep Learning, Natural Language Processing (NLP), and Optimization; Network Security, Advanced Cryptography, Cyberattacks (Pentesting), PKI, and Vulnerability Auditing.

### Sorbonne Université | *B.Sc. in Mathematics*

Paris, FR | 2025 – 2026

- Prestigious French university degree covering core areas of pure and applied mathematics, including analysis, algebra, probability, topology and statistics.

### Lycée du Parc | *Preparatory Classes in Mathematics, Physics and Computer Sciences*

Lyon, FR | 2022 – 2024

- Post-secondary top-tier preparation program for the competitive entrance examinations to French Engineering Schools in the Grandes Ecoles system.

### French Baccalaureate | *Highest honors with jury congratulations*

Aix-en-Provence, FR | 2022

- French Baccalaureate obtained with the highest possible distinction.

## Professional Experience

### Télécom Paris Students Union Board | *Community manager, student integration*

Member | 04/2025 – 04/2026

- Designed promotional materials, managed social media for student life and school events.
- Organized major Student Union activities such as new student integration and campaign events.

### Alcatel Submarine Networks | *Internship in Telecommunications*

Intern | 07/2025 – 08/2025

- Global leader in submarine telecommunications cable design.
- Computer-aided modeling, prototyping, numerical simulations, and optical data analysis applied to quality control.

### Eurofins EAG Laboratories | *Internship in Theoretical Physics*

Intern | 04/2022 – 05/2022

- Company specialized in physico-chemical interface analysis.
- Analysis and exploitation of experimental data, creation of digital content to promote a new piece of equipment ([youtu.be/iQLEkX8hljw](https://youtu.be/iQLEkX8hljw)).

## Achievements

### Stochastic Texture Generator

12/2025

- Procedural texture synthesis solving tiling on large surfaces via stochastic processes and blending. Transforms source textures into seamless materials without perceptible repetitive patterns.
- Available online: [tom-effernelli.vercel.app/project-page-dev-stochastic-texture](https://tom-effernelli.vercel.app/project-page-dev-stochastic-texture)

### Transformer-based Language Model (from scratch)

11/2025

- Implemented a LLM from scratch based on the 'Attention Is All You Need' paper, using the Transformer architecture and multi-head self-attention mechanisms in PyTorch. Available online: [tom-effernelli.vercel.app/project-page-dev-small-llm](https://tom-effernelli.vercel.app/project-page-dev-small-llm)

### Personal Portfolio Website

09/2025

- Developed a personal portfolio showcasing software and graphic design projects. Using Next.js, React, Tailwind CSS, with a focus on responsive design and accessibility. Available online: [tom-effernelli.vercel.app](https://tom-effernelli.vercel.app)

### Hackathons & GameJams | *Participant and organizer*

11/2025

- Coding competitions participation: Top2 Sorbonne University GameJam, Top5 Ecole 42 hackathon...
- Organizing the Hack the Fork ([hackthefork.com](https://hackthefork.com)) hackathon on sustainable food: sponsorship, mentor/participant recruitment, communication.

## Skills

**Languages:** C, C# (+ Unity), Python, Javascript, HTML, CSS

**Frameworks:** Next.js, React, Tailwind CSS

**Tools:** Git, Responsive design

**Social:** Community management, event planning, project management

**Languages:** French (native), English (C1), German (B1), Spanish (A1)

**Arts:** Piano (9 yrs conservatory), DJing, Adobe Suite (Photoshop, After Effects, Premiere Pro), Theater (4 yrs)