

Sascha Roth

STUDENT IN THEORETICAL COMPUTER SCIENCE AND APPLIED MATHEMATICS

✉ sascha.roth@telecom-paris.fr 🏠 <https://sroth63.github.io> 🌐 [sroth63](#) 🌐 [Sascha Roth](#)

Passionate CS and math student at Télécom Paris with a **4.0 GPA** and **hands-on research**.

Proven problem-solver with **300+ algorithmic challenges solved** and a track record of secure and efficient programming in Python and C++.

Bringing strong research rigor and coding depth to **cutting-edge R&D**.

🎓 Education

Engineering degree (Master's equivalent)

Palaiseau, France

TÉLÉCOM PARIS, INSTITUT POLYTECHNIQUE DE PARIS

September 2023 - August 2027

- Majors: Applied Algebra & Theoretical CS | Minor: Data Science | GPA : 4.0/4.0
- Research Project: Benchmarked cryptographic primitives for zero-knowledge signature protocols. Contribution to the website [zka.lc](#).
- Engineering Project: Built a small self-driving car using a Raspberry Pi, integrating Python control systems, web interface for remote driving, and robust Git/Linux workflows in a collaborative team setting.
- Relevant coursework: Cryptography, Complexity Theory, Advanced Algorithms, Formal Verification, Quantum Technologies, Mathematical Optimization.

Preparatory Class (Math / CS / Physics)

Clermont-Ferrand, France

LYCÉE BLAISE PASCAL

September 2021 - June 2023

- Project: Braess's Paradox Simulation. Modeled a city's road network as a graph and implemented Python's algorithm to simulate and optimize traffic flows, demonstrating how adding roads can paradoxically worsen congestion.

🔧 Experience

Research Intern, Cryptography

Palaiseau, France

TÉLÉCOM PARIS, INSTITUT POLYTECHNIQUE DE PARIS

August - December 2025

- Designing and implementing a post-quantum signature protocol under supervision of Matthieu Rambaud.
- Focus: Practical efficiency, security assumptions, and benchmarking.

Independent Programming Projects

- Solved 300+ problems across CryptoHack, Project Euler, CSES — ranked top 0.7% (CryptoHack leaderboard).
- Personal / portfolio website: sroth63.github.io. Includes problem writeups and technical notes.

Mountain Refuge Assistant

Saint-Martin, Switzerland

CABANE DES BECS DE BOSSON

July - August 2024

- Personal development training as part of my studies at Télécom Paris.

🔧 Skills

Languages French (native), English (fluent), German (advanced)

Programming Python (SageMath), C, C++, Java, HTML, CSS, JavaScript, SQL, Rocq

Tools Linux, Git, LaTeX, Typst