# Grégoire **Locqueville**

*Software Engineer*

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## Experience

**Full-Stack Software Engineer**                     Jul. 2024 — Present

*CNRS, Institut des Systèmes Complexes*                     *Paris, France*

- Development (**Haskell, Purescript**) of a collaborative web workspace with facilities for knowledge mapping
- Integration of **theoretical mathematical algorithms** into a web application

**Research Engineer**                     Jan. 2021 — Dec. 2023

*Sorbonne Université*                     *Paris, France*

- Led the **transition** from prototype software into a finished digital music instrument, its **documentation** and its **distribution**: http://chorus-digitalis.lam.jussieu.fr/voks.html
- Conception and implementation of a **scientific protocol** to validate the instrument; subject recruitment and direction; result **qualitative** and **quantitative** analysis.

**Ph.D. Researcher**                     Dec. 2018 — Jun. 2022

*Sorbonne Université*                     *Paris, France*

- **Conception**, **implementation** and **use** of the Voks music instrument.
- Research communication both in the **traditional form** of research articles and **international conference** presentations (*NIME 2019, Porto Alegre, Brazil*; *CMMR 2023, Tokyo, Japan*), and through **music performances** and participation to the prestigious *Guthman contest, Atlanta, U.S.A* (2nd prize).
- Intern supervision.

**Teaching Assistant**                     2019 – 2021

*Sorbonne Université*                     *Paris, France*

- **Teaching**; pivotal role in **faciliation of instructional activities** while navigating the challenges posed by the COVIDr-19 pandemic.
- Courses taught : **Discrete Mathematics**, **Algorithmics**.

## Education

**Ph.D.,** *Sorbonne Université, Paris, France*                     2022

**ATIAM Masters,** *Sorbonne Université, Paris, France*                     2018

- **Acoustics, Signal Processing, Computer Science** applied to **Music**
- Student project: Development of a **physics-based**, **real-time**, high-quality clarinet synthesizer: https://www.youtube.com/watch?v=kJTrg8ovfIk

**Master of Science,** *Centrale Paris, Châtenay-Malabry, France*                     2017

Major in **Computer Science**

**Preparatory Classes,** *Collège Stanislas, Paris, France*                     2013

2-year intensive preparation for the highly selective French Grandes Écoles.
Major: **Mathematics** and **Physics**; Option: **Computer Science**.

**High School Diploma,** *Saint-Louis de Gonzague, Paris, France*                     2011

Major in **science**; with **highest honors**.

## Skills

### Languages

- **French** : Native
- **English** : Fluent (C1)
- **German** : Basic proficiency

### Programming Languages and Technologies

- Haskell, Purescript, Python, Faust, Max/MSP, C, C++
- Front-end and back-end development
- Audio and graphics programming

## Personal Projects

### Musical Live-Coding Tool

**Amati**: Free, open source audio plugin for live-coding in Faust, for musical performance and production: https://github.com/glocq/Amati

### Musical Performance Tool

**Galatea**: A free, open source web application that turns any pointer-like device (mouse, graphic tablet…) into a **MIDI controller**: https://github.com/glocq/Galatea

### Procedural Generation

**Escherscape**: A free, open source demo of declarative procedural generation in an FPS-like setting: https://github.com/glocq/escherscape

### Blogging

Blog posts about technical subjects: https://glocq.github.io/en/blog/