

Louis F. Abraham

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Skills and Tools

Mathematics, statistics, machine learning, theoretical computer science: Graduate topics.

Programming languages: Python 3 (CPython, **PyPy**), C (with **ctypes**), Javascript (DOM), Java, OCaml...

Software / Libraries / Tools / Technologies

- Communication: Markdown, **pandoc**, LaTeX, Beamer, Microsoft Office Suite.
- UNIX development: admin, console, **make**, **git**.
- Mathematics-oriented programming: **NumPy**, **SymPy**, **SageMath**.
- Data science: **scikit-learn**, **pandas**, **h5py**.
- Deep learning: **Keras**, **Tensorflow**.
- Web: search, scraping, automation, development (Bootstrap, Flask), servers (nginx), hosting, DNS.
- Cybersecurity / Network / Reverse engineering: Chrome Developer Tools, mitmproxy, Wireshark, ncat (& nmap), Kali Linux (**aircrack-ng**, BeEF, Metasploit...), decompilation (AS3 P-code, x86 assembly)...
- Miscellaneous: Blockchains, **Ethereum**, SQL, NoSQL, ORM, regular expressions, **Cython**, Graphviz...

Education

- 2015 - 2019** **Ingénieur Polytechnicien** - École polytechnique (Palaiseau)
*Majoring in computer science and mathematics in France's top scientific school.
Youngest candidate accepted (became senior bachelor student when 17 years old).*
- 2017** **Philosophy BA** - Paris Nanterre University
- 2013 - 2015** **Classe préparatoire aux Grandes Écoles MPI** - Lycée Louis-Le-Grand (Paris)
- since 2007** **Music** (piano, harmony, analysis, conducting and other topics) - Conservatoire de Paris

Experience

- 2017** **Study on Digital Identity in France**
*Study commissioned by the French Ministry of the Interior's Centre for Advanced Studies (**CHEMI**) and carried out along with the ENS-Ulm (Prof. David Naccache) and the **FITS**.*
- 2017** **e-FICC Quant Researcher** - BNP Paribas CIB, London
- 2017 - 2018** **Founder & Head of BADA S** (*Binet Algorithmes et Data Science*)
Student association for **competitive programming**, **data science** and **CS events**
- 2016 - 2017** **Oral examiner in mathematics** - Lycée Louis-Le-Grand (Paris)
- 2016 - 2017** **Group research project:** *Deep neural networks for music transcription and composition*
- 2015 - 2016** **Administrative analyst** - French Ministry of Foreign Affairs

Awards

- **ACM ICPC SWERC** (2016, 2017): Competitive programming competition among the universities of the world. Captain of Polytechnique's team that ranked 21 amongst 77 European teams in the regional contest.
- **Concours Général** (2013): Most prestigious academic competition in France. Distinction in Mathematics, youngest laureate of all subjects.

Others

- Languages** French (native speaker), German (Goethe-Zertifikat C1), English (fluent).
- Music** Piano: winner of international contests, concert soloist with orchestral accompaniment.
- Sports** Horse riding, Skiing, Swimming, Scuba diving.
- Hobbies** Literature, Philosophy, Competitive programming, Anime, Video games.
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