

Tom Monnier

PhD student at ENPC

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Education

- 2020 – 2023 **PhD student in Computer Vision**, *Imagine - ENPC*, Paris.
Focusing on solving computer vision tasks without manual annotations, through automatically generated data, self-supervised learning techniques or unsupervised algorithms
Supervisor: Mathieu AUBRY
- 2015 – 2019 **Master in Mathematics and Computer Science**, *MINES ParisTech*, Paris.
Final-year: Geostatistics and applied probabilities, Extreme value statistics, Deep learning for computer vision, Data analysis, Digital audio encoding, Distributed applications
Second-year: Statistics, Machine learning, Data mining, Computer science (C++), Information systems
First-year: Fundamental mathematics, Optimization, Probability, Computer science (Java)
- 2013 – 2015 **BS-level Preparatory Courses**, *Lycée Blaise Pascal*, Orsay (France).
Intensive courses in fundamental mathematics and physics preparing for Les Grandes Écoles selective exam
- 2013 **Baccalauréat Diploma in Sciences**, *Lycée Blaise Pascal*, Orsay (France).

Work experience

- Sep. 2019 **Research Engineer**, *École Nationale des Chartes*, Paris. **Python**
- Jan. 2020 Algorithms integration in web applications for watermark recognition and document element extraction
- April 2019 **Research Intern in Computer Vision**, *Imagine – ENPC*, Paris. **Python**
- Aug. 2019 Master thesis on automatically extracting visual elements from historical document photographs
Supervisor: Mathieu AUBRY
- Nov. 2018 **Data Scientist**, *Tinyclues*, Paris. **Python**
- March 2019 Part-time (2 days/week) job while completing the final year at MINES ParisTech, carrying on with the internship work, with an emphasis on parallel programming and NLP methods for search queries vectorization
- Jan. 2018 **Data Science Intern**, *Tinyclues*, Paris. **Python**
- July 2018 R&D of in-house machine learning methods to improve the predictive solution performance, with an emphasis on unsupervised representation learning through collaborative filtering and matrix factorizations
Supervisors: Andrey KRIVONOGOV and Artem KOZHEVNIKOV
- July 2017 **Research Assistant in Biostatistics**, *MSKCC*, New York. **Python, R**
- Dec. 2017 Individual research project, using statistical learning to conduct tumor specific analyses including clonal structure estimation, timing of mutations and unsupervised genomic classification (report available on request)
Supervisors: Matahi MOARII and Elli PAPAEMMANUIL
- Sept. 2016 **Research Intern in Game Theory**, *Université Paris-Dauphine*, Paris.
- March 2017 Part-time research internship, studying bargaining games through Nash axiomatic approach and developing numerical solutions for the game of discrete quantities distribution (French report available on request)
Supervisors: Guillaume VIGERAL and Miquel OLIU-BARTON
- Sept. 2016 **Web Developer**, *Private customer*, Paris. **HTML, CSS, PHP**
- Dec. 2016 Development of a public website to display collections of historical letters (<http://archives-cavaignac.com>)

Skills

- Language French (mother tongue), English (fluent), Spanish, Italian, Japanese (intermediate/beginner)
- Programming Python, Java, C++, SQL, MATLAB
- IT Tools Bash/Unix shell, Vim, Git, Docker, Postgres

Personal interests

- Art Analog photography, Drums, 90s Movies and 70s Music
- Sport Climbing, Sailing, Ski and Tennis