

# Adam Chader

Github: <https://github.com/Adchad>

Linkedin: <http://linkedin.com/in/adam-chader>

Email: [adam.chader@telecom-paris.fr](mailto:adam.chader@telecom-paris.fr)

Number: 0637478629

## EDUCATION

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- **Institut Polytechnique de Paris** Saclay, France  
*Master of Science* *sept 2021 - sept 2022*
  - **Parallel and Distributed Systems:** High Performance Computing, Cloud Infrastructures, Middlewares, Distributed Software Architecture
- **Télécom Paris** Saclay, France  
*Engineering Degree* *sept 2019 - sept 2022*
  - **Distributed Systems:** Software Architecture and Project Management, Parallel and Distributed Computing, Algorithms, Blockchain
  - **Data Science:** Linear Regression, Machine Learning optimization, Advanced Statistics, Logical Programming (Prolog), Data Mining
- **Lycée Chaptal** Paris, France  
*Preparatory Classes: PCSI/PSI\** *sept 2017 - july 2019*
- **Lycée St-Michel-des-Batignolles** Paris, France  
*High School Diploma* *july 2017*

## EXPERIENCES — PROJECTS

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- **Distributed Data Structures — Research Project** *sept 2021 - sept 2022*  
*Institut Polytechnique de Paris*
  - Improving performances of distributed applications by removing bottlenecks created by concurrent memory accesses. The removal of bottlenecks is possible by degrading the specifications of the distributed data structures. Study of Distributed Data Stores (Apache Ignite), and modification of the source code.
- **Hadoop MapReduce — SLR207** <https://github.com/Adchad/SLR207>  
*Télécom Paris* *march 2020 - june 2020*
  - Reimplementation of Hadoop's MapReduce from scratch using ssh. The idea of this project was to learn about the MapReduce algorithm, which is classical in distributed systems. It was implemented in Java. We then study the performance of our algorithm and try to empirically prove Amdahl's Law.
- **Paxos — SLR210** <https://github.com/Adchad/slr210>  
*Télécom Paris* *march 2020 - june 2020*
  - Implementation from scratch of the Paxos/Synod algorithm, using Akka Actor Systems. This algorithm's goal is to do State Machine Replication, by solving a tweaked definition of Consensus called Obstruction-Free Consensus
- **PresSync** <https://github.com/Adchad/PresSync>  
*Télécom Paris* *june 2020*
  - Presentation Manager using Reveal.js. The goal of this project was to develop a solution allowing to share a presentation between teacher and student, and synchronising it. It uses a Python Flask backend with SocketIO, and a vanilla Javascript frontend
- **CleanLake** *sept 2019 - june 2020*  
*Télécom Paris*
  - Robot Boat to clean oceans. The project was realised for PACT at Télécom Paris, it uses an embedded computer to pilot a boat and clean plastic off of water surfaces. The embedded chip is programmed in C++, and the whole project is integrated in Java

## SKILLS

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- **Programming Languages:** Java, C, C++, Python, JavaScript, Bash, SQL, Prolog
- **Tools:** Git, Linux/Unix
- **Cloud:** Kubernetes, Docker, GCP
- **High Performance Computing:** CUDA, MPI, OpenMP
- **Data Science:** Keras/TensorFlow, ScikitLearn
- **Soft Skills:** Teaching, Public Speaking, Stress Management
- **Languages:** French(Mother Tongue), English(Bilingual), German(Intermediate)

## MISC

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- **Student Jobs:** Private tutor at Complétude
- **Sports:** Swimming at National Level, Basketball
- **Music:** Cello and Bass guitar at Music School