# Saalik HATIA

## Distributed Systems Engineer



#### Skills

General SkillsToolsLanguagesDistributed systemsNoSQLJavaConsistency protocolsRedisGoConcurrent programmingRocksDBPython

Data replicationKafkaBashFormal specificationFoundationDB

Transactionnal systemsDockerSpeakingStorage systemsGitFrench - NativeCRDTsUNIX environnementEnglish - Fluent

Database design and architecture Object Oriented Programming

## Experience

2018-2023 **PhD Thesis**, Team DELYS - LIP6 Sorbonne Université - INRIA, advisor Marc Shapiro, Paris VI

- Collaboration with Scality in the scope the ANR RainbowFS to work on having a converging distributed FS without locks on a Main-Main configuration
- State of the art on replication and consistency protocols in distributed systems, DB backends, CRDTs and work on improving the AntidoteDB architecture to reduce consistency issues
- Creation of transactionnal consistency semantics for database to build correct database backends, wrote multiple PoC databases.
- Thesis: Leveraging formal specification to implement a database backene https://www.theses.fr/s267382
- Tech Report: Specification of a Transactionally and Causally-Consistent (TCC) database https://hal.science/hal-02902474v2
- O Publication: Towards a correct, high-performance database backend.
- European Project LightKone (H2020): https://lightkone.eu/
- ANR Project RainbowFS : https://rainbowfs.lip6.fr/

#### 2020-2022 Co-Founder, Henguo, Paris

Online training agency. We offered training in MS Office Suite, interior design as well as language courses for professionals looking to learn or improve their skills. Henquo also offered consulting for companies looking to create a training program for their employees. Henquo obtained the Qualiopi certification in 2021.

2018-2022 CS Teacher, Sorbonne Université, Paris VI

- Concurrent Programming
- O Introduction to Object Oriented Programming in Java
- Introduction to operating systems and shell

2018 Master Research Intern, LIP6 Sorbonne Université - INRIA, advisor Marc Shapiro, Paris VI
(6 months) Study of the AntidoteDB log and materializer. Work on recovery algorithm from the log and implementing safe pruning of the log.

2015-2016 **Product Manager**, ookee (Shutdown), Paris XIV

ookee was an Android smartphone startup building a product for senior users. Product manager of services, from business development to vulgarization to designing the products.

#### Education

- 2023 **PhD**, Leveraging formal specification to implement a database backend, Sorbonne Université & INRIA
- 2018 Master's Degree in Computer Science (Système et Applications Réparties (SAR)), *UPMC*, Paris VI

Design and development of distributed, parallel, large scale systems and applications.

## Hobbies

Cycling, Cooking, General tech, Machine architecture, Physics