

Mourjo Sen

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EXPERIENCE & PROJECTS

HELPSHIFT Software Engineer III

October 2015 - present

- Product development in Java and Clojure with focus on **platform-related work** with Elasticsearch, ScyllaDB, MongoDB, Kafka, Redis, Spark.
- "Subject-matter expert" for **Elasticsearch-related** work at Helpshift.
 - Built a DSL-based **search engine** using **Elasticsearch**, while providing helpful **autocompletions**.
 - **Optimizing queries** with static analysis to provide 60% faster results and 100% increase in percolation capacity.
- Wrote property-based tests (generative tests) using the **QuickCheck** method to automate test case generation resulting in 80,000 assertions in 1 min.
- "Subject-matter expert" for benchmarking and **capacity-planning** technologies at Helpshift. Developed a highly concurrent benchmarking framework using **Go-like channels** and thread pools.
- Sole maintainer of authentication/authorisation of **HTTP sessions**.
- Part of **technical interview panel** at Helpshift.

SPAM DETECTION IN TWITTER with Dr Arnaud Legout, Inria

April 2014 - August 2015

- Analyzing the **Twitter graph** to find a measure of "trust" based on users' activities and connections on Twitter, to detect spam behaviour.
- Using Twitter **REST APIs** and **Streaming APIs** to collect data.
- Followed with a 6-month internship on this topic funded by **Microsoft Research**.

PET PROJECTS

February 2011 - present

- **EduSoc**: A web-based **social network for education** that promotes education by making it a social activity. Developed using **PHP** and **MySQL**. github.com/vabh/EduSoc.
- **JChirp**: A **Java wrapper** to access to the Twitter REST and Streaming APIs with authentication. github.com/vabh/JChirp.
- **Alienvation**: Developing a GUI game using **Java Swing** in which a player controls spaceships and fights against aliens. github.com/mourjo/Alienvation.

OTHER PROJECTS

July 2012 - January 2015

- **Scheduling virtual machines** in a simulated datacentre to meet the SLA, minimize energy consumption and maximize revenue. Used CloudSim framework.
- **AI game engine** in Java for the African game Oware.
- **CreatureSim**: A Java project to simulate an environment with **communicating independent agents** that move around, form groups, search for interest points and have real-time **plugin-based behaviour**.
- Three research publications, two of which are **IEEE publications**.

EDUCATION

UNIVERSITÉ NICE

MS in Computer Science

2013 - 2015, Nice, France

– First Year:

- Grade: 15.18/20 (**75.9%**)
- Rank: **2nd**

– Second Year:

- Specialization in Networking
- Grade: 15.98/20 (**80.1%**)
- Rank: **1st**

ST. XAVIER'S COLLEGE

BSc in Computer Science

2010 - 2013, Kolkata, India

Grade: 83.6% (**Rank 4th**)

MOOCS

2017 - present

- Introduction to **Functional Programming in OCaml** (Université Paris Diderot)
- **Functional Programming Principles in Scala** (École Polytechnique Fédérale de Lausanne)





AWARDS

- Spot Award at Helpshift for **benchmarking** and **streamlining** of Elasticsearch cluster.
- **Laboratory of Excellence (LABEX)** scholarship of € 12,500 awarded by Labex UCN@Sophia for first and second year of MS.

SKILLSET

Clojure • Java • Python • Scala •
OCaml • Kafka • Cassandra •
ElasticSearch • MongoDB

LINKS

 github.com/mourjo
 [linkedin.com/in/mourjosen](https://www.linkedin.com/in/mourjosen)
 medium.com/@mourjo_sen
 twitter.com/mourjo_sen