Mourjo Sen

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EXPERIENCE & PROJECTS

HELPSHIFT Backend Software Engineer III
October 2015 - present

- Product development in Clojure with focus on **platform-related work** with Elasticsearch, ScyllaDB, MongoDB, Kafka, Redis.
- "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 **Mircosoft 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: **2**nd
– Second Year:
  - Specialization in Networking
  - Grade: 15.98/20 (**80.1%**)
  - Rank: **1**st

ST. XAVIER'S COLLEGE
BSc in Computer Science
2010 - 2013, Kolkata, India
Grade: 83.6% (**Rank 4**th)

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
 twitter.com/mourjo_sen
 quora.com/Mourjo-Sen
 facebook.com/sen.mourjo