

Simone Mosciatti

Curriculum

Italy
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📁 [siscia.github.io](https://github.com/siscia)



Education

2013–Present **Computer Engineering**, *Politecnico di Milano*, Milan, Italy.

2014–2015 **Computer Engineering**, *Tongji University*, Shanghai, .
Double Degree Program Politong

Research Projects

2016 **Estimating time to completion for MapReduce jobs: the MARC approach**, *Politecnico di Milano*, NECST Lab.

Abstract: Nowadays, the size of data that need to be analyzed is enormous and it is growing faster than ever; moreover, results of complex computations are expected in an increasing timely manner, in order to achieve business goals. Distributed systems have been developed to handle huge data processing, but they are complex, expensive, shared between different users and even different organizations. Furthermore, the increasing heterogeneity of computations that can run on these systems even more exacerbates the problem of finding an efficient allocation of the available resources, as it is hard to estimate the job completion time under different cluster and application configurations. In this work, we leverage MARC, a framework for the estimation of resource consumption, as a mean to provide accurate models for the completion time of MapReduce jobs, executed on a Hadoop cluster. We take into consideration the percentage of job completion as a resource that can be consumed; a piece-wise linear model is then generated subdividing the job execution into different phases, according to configuration parameters and runtime metrics. The proposed model allows the user to have both a better estimate of the time required by an already submitted job to complete and the ability to perform more accurate resource reservations, towards a more efficient scheduling and a higher cluster utilization.

Experience

2013–2014 **Software Engineer, Freelance**, *workinvoice.it*, Milan.

The platform is a marketplace to buy and sell invoices.

Starting from a rough prototype I re-wrote the whole backend code in such a way to be maintainable and scalable, I also added interactivity via JS.

As requested by my customer the backend is written in Clojure while the frontend uses a more standard HTML5/CSS/JS combination.

- Build authentication system for different kinds of users.
- Design and implementation of the API
- SQL schema design
- Frontend work

2012–Present **OpenSource Author.**

I am the author of the following projects:

- github.com/siscia/effe Open Source Software to provide the same advantages of AWS Lambda. Introducing Effe
- github.com/siscia/effe-tool Makes it easy and simple to work with effe
- **Introduction to Highly Scalable, Fault Tolerant, Distributed System** Tiny introduction to the ideas behind Highly Scalable, Fault Tolerant, Distributed system.
- github.com/siscia/numerino Priority Queue is Elixir/Erlang/OTP
- github.com/siscia/postgres-type Makes possible the use the JSON datatype in Postgres database with clojure.

2012–Present **OpenSource Contribution.**

Contribution to the following libraries

- github.com/clj-time/clj-time the standard way to handle time in clojure
- github.com/budu/lobos SQL schema manipulation and migration library for clojure
 - I made possible to use lobos with the last version of the java driver.

Languages

Italian **Mother tongue**

English **Proficient** *I was an AFS exchange student in 2011-2012 at Carthage, MO, USA high school, I followed classes in English, I read and write in English*

Chinese **Basic**

Programming Skills

Proficient **Clojure**, *compojure, monger, korma, core.async.*

Proficient **Python**, *Flask, Django.*

Proficient **Elixir**, *Erlang/OTP, BEAM VM.*

Very Good **SQL**, *PostgreSQL, SQLite3.*

Very Good **NoSQL**, *MongoDB.*

Very Good **Java**.

Very Good **Go(lang)**.

Good **C/C++**.

Good **JavaScript**, *mongoose, node.js.*

Basic **Haskel**.

Basic **Rust**.