

Morales Mikael

SOFTWARE ENGINEER

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Education

Swiss Federal Institute of Technology (EPFL)

Lausanne, Switzerland

MASTER'S DEGREE IN COMPUTER SCIENCE. SPECIALIZATION: SOFTWARE SYSTEMS. GPA: 5.55/6.0

2017 - 2020

Relevant courses: Advanced compiler construction, Big data, Foundations of software, Machine learning.

Swiss Federal Institute of Technology (EPFL)

Lausanne, Switzerland

BACHELOR'S DEGREE IN COMPUTER SCIENCE. GPA: 5.0/6.0

2013 - 2017

Relevant courses: Data structures, Algorithms, Database Systems, Operating Systems, Software Engineering, Compilers

Skills

Proficient

JAVA, SCALA, KOTLIN, SQL, PYTHON, C

Languages

ENGLISH (PROFESSIONAL WORKING PROFICIENCY)

FRENCH (NATIVE LANGUAGE)

SPANISH (NATIVE LANGUAGE)

Experience

Expedia Group

Geneva, Switzerland

SOFTWARE DEVELOPMENT ENGINEER III

Jan. 2021 - Present

I am working in the pricing optimization team, which develops and operates a suite of services enabling Expedia Group to provide the best possible deals to travelers by dynamically adjusting prices. My work consists of designing, implementing, and maintaining low-latency micro-services with a high availability & throughput.

- Development of multiple applications receiving up to 2M TPS, at peak time. Written in Java, Scala & Kotlin.
- Logging, metrics and monitoring with DataDog, Grafana & Splunk.
- Infrastructure as code using Terraform & Cloudformation.
- Leveraging various AWS technologies: SNS, SQS, S3, RDS, ElastiCache, LoadBalancer, VPC, ECS/EC2 with auto scaling
- CI/CD with TeamCity, Github Actions, Spinnaker and Jenkins.

Oracle Labs

Zurich, Switzerland

SOFTWARE ENGINEER INTERN

Feb. 2020 - Aug. 2020

I worked on making efficient property projections in an in-memory graph query runtime. I managed to implement a solution that allows graph queries to be faster than SQL queries in most cases using much less memory.

Facebook

London, United Kingdom

SOFTWARE ENGINEER INTERN

July 2018 - Oct. 2018

I worked on Fresco, an Android image management library. I reduced the size of the library by two by providing an alternative implementation that did not depend on native code without losing functionalities or performance.

PocketCampus Sàrl

Lausanne, Switzerland

SOFTWARE DEVELOPER

June 2017 - June 2019

Implementation of the Android version of the official EPFL campus app.

Projects

Lancet: A self-correcting Latency Measuring Tool

Switzerland

WRITTEN IN C & PYTHON

Feb. 2019 - Dec. 2019

I worked on Lancet, a self-correcting latency measuring tool. My work consisted in implementing agents that leverage NIC-based hardware timestamping to measure RPC end-to-end latency using exclusively the standard Linux kernel-based implementations of networking protocols to achieve precise μ s-scale client-side measurements. I also extended my work by implementing the full TPC-C benchmark within the Lancet framework.

Lisp-like language compiler and garbage collector

Switzerland

WRITTEN IN SCALA & C

Jan. 2018 - June 2018

Implementation of key parts of a compiler and a run time system for a Lisp-like programming language. The project includes the implementation of high level concepts such as closures, continuations and tail call elimination. But also the usage of intermediate representations to perform optimizations. A Mark-and-Sweep garbage collector written in C was also implemented.

Android development

Switzerland

WRITTEN IN JAVA

Jan. 2017 - June 2019

Integration of new features in the EPFL Campus app. My main focus has been on improving functionalities such as: Moodle, Maps, Public Transport, Campus card, Restauration,... to make life at EPFL easier for the students and employees.

Awards and honors

Teaching Assistant Award

Lausanne, Switzerland

SOFTWARE ENGINEERING BY PROF. GEORGE CANDEA

2017

I won the teaching assistant award for teaching excellence during my time as a teaching assistant for the software engineering class. I was providing technical support for students, introducing them to software engineering techniques such as SCRUM, Design Patterns, Testing, git and I was testing and reviewing their projects which consisted in building an Android app.