

Jad DARROUS | Curriculum Vitae

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My Ph.D. studies

- Ph.D. Topic.....
- I'm working on scalable and efficient data management for building and running data intensive services in geographically-distributed clouds and Fog/Edge environments.
 - The first part of my Ph.D. was dedicated for improving service provisioning in geo-distributed clouds and Fog/Edge environments. We worked on network-aware retrieval of Virtual Machine Images in geo-distributed clouds and on the network-aware placement of container images in Edge environment.
 - Currently, I'm focusing on reducing the storage cost of data intensive clusters. More specifically, we study the opportunities and the challenges in integrating *erasure coding* for online data analytics.

- Research Project.....
- I'm part of DISCOVERY Initiative (see <http://beyondtheclouds.github.io>), a research project that explores the methodologies and algorithms needed to deploy and operate massively distributed cloud infrastructure.
 - My advisors are Shadi Ibrahim and Christian Perez.
 - I'm a member of Avalon and Stack teams of Inria research center.

- Publications in international conferences.....
- J. Darrous, S. Ibrahim, C. Perez, "Is it time to revisit Erasure Coding in Data-intensive clusters?" in *MASCOTS* - Oct. 2019, Rennes, France.
 - J. Darrous, T. Lambert, S. Ibrahim, "On the Importance of Container Image Placement for Service Provisioning in the Edge" in *ICCCN* - Jul. 2019, Valencia, Spain.
 - J. Darrous, S. Ibrahim, A.C. Zhou, C. Perez, "Nitro: Network-Aware Virtual Machine Images Management in Geo-Distributed Clouds" in *CCGrid* - May. 2018, Washington DC, USA.

- Posters in international conferences.....
- J. Darrous, S. Ibrahim, "Enabling Data Processing under Erasure Coding in the Fog" in *ICPP* - Aug. 2019, Kyoto, Japan.

- Publications in national conferences.....
- J. Darrous, "On the (In)Efficiency of IPFS for Geo-distributed Virtual Machine Images Management" in *Conférence en Parallélisme, Architecture et Système (CompAS)* - Jun. 2017, Sophia-Antipolis, France.

- Papers reviews.....
- I reviewed papers in *ICPP 2019*, *SmartData 2019*, *HPBDC 2019*, *Cluster 2017*, *CCGrid 2017* and *CloudCom 2017*.

Education

- Academic Qualifications.....
- **PhD in Informatics (ongoing)** **Lyon, France**
École Normale Supérieure (ENS) de Lyon 2016–2019
 - **Master in Parallel and Distributed Systems** **Grenoble, France**
University Grenoble-Alpes, Graduation mention is Very Good 2014–2016
 - **Bachelor in Computer Science** **Damascus, Syria**
Damascus University, Graduation mention is Very Good 2007–2012

- Research Internships.....
- **A Programming and Data Model for In-Situ frameworks**
'Inria Grenoble Rhône-Alpes research center', Feb - Jun 2016

As a member of the DataMove team and under the supervision of Bruno RAFFIN, I did my Master's internship in the domain of in-situ analytics. The goal was to design a new Programming and Data Model for In-Situ frameworks to ease the representation of expressiveness of complex scientific workflow.

- **Improving the EASY-Backfilling scheduler using Machine Learning algorithms**

'Inria Grenoble Rhône-Alpes research center', May – Jul 2015

Improve the EASY-Backfilling scheduler in HPC environment using Machine Learning algorithm called Learning to Rank. An average improvement of 68% has been achieved in case the job run-time is already known (clairvoyant). My advisors were Denis TRYSTRAM and Eric GAUSSIER.

Notable Projects.....

- **One Month Master Project: NachOS: Mini Operating System - 2015**

In a group of 4 students, we implemented IO routines, multithread model, virtual memory, file system, and networking in an instructional Operation System called NachOS. Rating: 16/20

- **Graduation project: Hand gesture recognition and Fingers detection - 2012**

Detect and recognize the hand, hand gesture and fingers gestures from Kinect depth sensor. Rating: 95/100.

- **4 Months project: Opinion Mining and Sentiment Analysis - 2011**

extract the positives and negatives opinions about products and their features from a free-form text crawled from the web. Rating: 94/100.

Previous Employment

- **Syrian Educational Publisher Co., for E-Publishing and E-learning**

Damascus, Syria

- *Software Developer*

Jan 2013–August 2014

I was a Software Developer (Web and Android) in small-sized company of 13 developers applying the Scrum agile methodology. Accomplished tasks:

- Extend the core libraries to cover more of the EPUB3 spec.
- Implement Unit Testing for the core libraries with code coverage of 70%.
- Develop 60% of the Android application (Epub3 Viewer).
- Implement the first prototype of the GWT website.
- Implements synchronization between applications running on different devices.

Technical skills

- C++ (programming competitions), Java (professional experience) and Python (research prototyping).
- Good experience with (SQL and NoSQL) databases.
- Good experience in network programming and multi-threading.
- Familiar with the topics related to Natural Language Processing, Data Mining and Machine Learning.

Honors and Awards

- PERSIVAL-Lab scholarship for academic excellence for the year 2015-2016.
- I was an active member in programming competitions (2009-2014):
 - I represented Damascus University (Faculty of Informatics) in the ACPC programming contest - the regional tier of ICPC - within a team of 3 students, and we got the 8th, 14th, and 11th place consecutively from 2009 to 2011.
 - I coached the teams of Damascus University in the ACPC programming contest 2012 and 2013.
 - I was a judge in the Syrian Collegiate Programming Contest (SCPC) - the national tier of ICPC - in 2012 and 2013.
 - I was a problems setter in many national and local contests.
- The 8th place in the fourth annual *Math Olympiad* contest held by Department of mathematics, Damascus University 2012.
- We won, as a team of three, the 3rd place in *Fikra Competition* for our "Simple Geometry Solver" project, Damascus 2011.