# Benoit SEGUIN

# PERSONAL DATA

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CITIZENSHIP: French

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#### Professional Experience

Current | PhD Student, DHLAB, EPFL

SEPT 2014 | Finding visual similarities in large databases of paintings.

Use of modern computer vision and image analysis techniques in order to allow art

historians and archivists to navigate large iconographic collections.

Aug 2014 | Scientific assistant CVLAB EPFL

SEPT 2013 | FastScan Project, with Prof. Fua

 $Implemented\ a\ fast\ multi-threaded\ prediction\ algorithm\ for\ mitochondria\ segmentation\ in\ SEM\ images.\ A\ prototype\ of\ integration\ directly\ with\ the\ software\ of\ a\ Microscope$ 

showed promising result in accelerating the scanning of biological tissues.

FEB-AUG 2013 | Master Thesis at IBM RESEARCH, Zurich

Estimating VLSI pattern sensitivity with respect to variability in optical

lithography printing, with Dr. Gabrani

Developed an automatic analysis tool for the success and the variability of the lithography printing process for a specific pattern (based on image analysis of SEM images and error evaluation). Showed how VLSI patterns react differently according to variations in

the printing conditions.

APR-SEPT 2011 | Internship at CARNEGIE MELLON UNIVERSITY, Pittsburgh

Unsupervised object detection with an eye-tracking system, with Prof.

Hebert

SKILLS

AREAS: Machine Learning, Computer Vision, Image Processing.

PROGRAMMING: Python, C++, Tensorflow, UNIX systems, basic web-programming with

Angular.

EDUCATION

2011-2013 Master of Science in Computer Science, EPFL, Lausanne

Very High Honours, GPA: 5.53/6.0

2008-2013 DIPLÔME D'INGÉNIEUR, École Polytechnique ParisTech, Palaiseau

GPA: 3.5/4.0

2006-2008 Preparatory Classes, Lycée du Parc, Lyon

GPA: 3.92/4

2006 Scientific Baccalaureate, Lycée Charles Nodier, Dole

Very High Honours

#### LANGUAGES

FRENCH: Mothertongue

ENGLISH: Fluent, TOEFL IBT 106/120, prior to a 5 months stay in the USA.

JAPANESE: Basic Knowledge, JLPT N4 (equivalent of CEFR A2). Two months stay in 2010.

#### EXTRA CURRICULAR ACTIVITIES

Piano: Certificat de fin d'étude, awarded with very high honors in 2005.

Choir: Has been part of multiple choruses, in Paris and Lausanne.

Member of the organizing team of the Lausanne's University Choir from 2013 to 2017. Main organizer of a classical concert attended by

2'000+ in 2017.

Robotics: In 2009, as the vice-chairman of the robotics association of the École

Polytechnique, led a team of 12 persons to the French Robotics Cup for

a top-15% finish.

## **AWARDS**

• Qualified for the final round of GOOGLE HASHCODE 2016 (top-50 out of 1000+ teams)

• BEST DEMONSTRATION AWARD at the Research Days of the CS Faculty of EPFL in 2017.

## **PUBLICATIONS**

M. Gabrani, B. Seguin, H. Saab Estimating pattern sensitivity to the printing process for varying dose/focus conditions for RET development in the sub-22nm era, in *Metrology, Inspection, and Process Control for Microlithography XXVIII*, 2014

- I. DILENARDO, B. SEGUIN, F. KAPLAN Visual Patterns Discovery in Large Databases of Paintings, in *Digital Humanities Conference* 2016, Krakow
- B. SEGUIN, C. STRIOLO, I. DILENARDO, F. KAPLAN Visual Link Retrieval in a Database of Paintings, in VISART Workshop at European Conference of Computer Vision 2016, Amsterdam.
- B. SEGUIN, I. DILENARDO, F. KAPLAN Tracking Transmission of Details in Paintings, in *Digital Humanities Conference* 2017, Montréal.
- B. SEGUIN The Replica Project: Building a visual search engine for art historians, in *ACM XROADS Magazine* Spring 2018.
- B. SEGUIN, L. COSTINER, I. DILENARDO, F. KAPLAN Extracting and Aligning Artist Names in Digitized Art Historical Archives, in *Digital Humanities Conference* 2018, Mexico.