Jean-Baptiste Boin

https://jbboin.github.io/
jeanbaptiste.boin@gmail.com

Stanford Ph.D. graduate interested in computer vision, mobile visual search, augmented reality.

Education

***Stanford University*, Ph.D., Electrical Engineering** 2012-2019
Graduated from the *Image, Video and Multimedia Systems* research group (advisor: Bernd Girod).
GPA: 4.05/4.00

***Stanford University*, M.S., Electrical Engineering** 2012-2014

***École polytechnique (France)*, B.S.** 2009-2012
Multidisciplinary training and specialization in Electrical Engineering. GPA: 4.18/4.00

Relevant Projects

***Image descriptor aggregation for Efficient Retrieval* (Ph.D. thesis)** 2015-2019
Developed a theoretical framework for aggregation and applied insights to real-world retrieval tasks

***Efficient Panorama Database Indexing for Indoor Localization* (CBMI 2019)** 2018-2019
Developed an end-to-end panorama database representation to maximize retrieval speed

***Recurrent Neural Networks for Person Re-identification Revisited* (MIPR 2019)** 2017-2018
Proposed a simplification of an existing video representation technique while increasing retrieval performance

***Art++* (supported by the Brown Institute for Media Innovation)** 2014-2016
Responsible for the technical part on the development of a platform for creation of AR museum tours
Developed a mobile application using state-of-the-art vision algorithms

***Effective Fisher Vector Aggregation for 3D Object Retrieval* (ICASSP 2017)** 2015-2016
Developed an image-based retrieval system achieving high compression of a video database

Work Experience

***Google* (USA)** June-September 2017
Intern in the Mobile Vision research team
- Integration and enhancements of existing systems for multi-object tracking

***STMicroelectronics* (France)** April-August 2012
Intern in a research team specialized in radiation hardened and ultra low voltage hardware design
- Participation in a project aimed at reinforcing a microprocessor to make it more resilient to errors
- Elaboration and implementation of a robust custom test protocol to be run on the microprocessors

***Red Tech Consulting* (Saudi Arabia)** July-August 2011
Junior consultant in a telecom consulting company for a project expanding the Saudi Internet network

Teaching Experience

***Teaching Assistant* (Stanford University)**
- Digital Image Processing (EE368) 2015, 2016, 2018, 2019
- The Fourier Transform and its Applications (EE261) Summer 2013

***Grader* (Stanford University)**
- Introduction to Linear Dynamical Systems (EE263) Fall 2013
- Digital Signal Processing (EE264) Fall 2013
- The Fourier Transform and its Applications (EE261) Summer 2013

Honors and Awards

- Best Paper Session, CBMI (*Efficient Panorama Database Indexing for Indoor Localization*) 2019
- Best Paper Award, MIPR (*Recurrent Neural Networks for Person Re-identification Revisited*) 2019
- Best Paper Award for Industry, ICIP (*Depth Augm. Stereo Panorama for Cinematic VR with Focus Cues*) 2016
- SCIEN Industry Affiliates Meeting: Apple Poster Award (*Depth Augmented Stereo Panoramas for Cinematic VR*), Intel Poster Award (*Art++: Augmented reality in museums*) December 2015
- Ranked 6th/135 at the Stanford Electrical Engineering Ph.D. qualifying examination January 2013
- First rank at the École polytechnique entrance examination July 2009

Skills

Programming: General purpose tools (Python, C++, MATLAB)
Mobile development (Android: Java and native C++)
Machine learning framework (Torch/PyTorch, Caffe, Tensorflow)
Front-end and back-end web development (HTML, CSS, JavaScript, PHP, MySQL)

Languages: English (fluent); French (native); Italian (intermediate); Turkish (intermediate); Japanese (basic)