

# Jean-Baptiste Boin

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Ph.D. graduate with an expertise in deep learning, and extensive experience in computer vision, mobile visual search, augmented reality.

## EDUCATION

<b>Stanford University, Ph.D., Electrical Engineering</b> Graduated from the <i>Image, Video and Multimedia Systems</i> research group (advisor: Bernd Girod). GPA: 4.05/4.00	2012-2019
<b>Stanford University, M.S., Electrical Engineering</b>	2012-2014
<b>École polytechnique (France), B.S.</b> Multidisciplinary training and specialization in Electrical Engineering. GPA: 4.18/4.00	2009-2012

## WORK EXPERIENCE

<b>CrowdAI (California, USA)</b> Machine learning research engineer Head of Machine Learning <ul style="list-style-type: none"><li>Managed a team in charge of building and maintaining the machine learning part of a platform for automatic model training and inference</li><li>Implemented deep learning model architectures and training processes to solve novel tasks (object detection, classification, keypoint detection, instance segmentation)</li><li>Executed on various customer projects by supporting data preprocessing, model training, predictions and evaluation</li><li>Stayed up-to-date with and synthesized published research, authored a research publication (NeurIPS workshop 2020)</li></ul>	2019 (current) 2019-2021 2021 (current)
<b>Google (California, USA)</b> Intern in the Mobile Vision research team <ul style="list-style-type: none"><li>Integration and enhancements of existing systems for multi-object tracking</li></ul>	Jun-Sep 2017
<b>Stanford University (California, USA)</b> Teaching assistant, Grader	2013-2019
<b>STMicroelectronics (France)</b> Intern in a research team specialized in radiation hardened and ultra-low voltage hardware design <ul style="list-style-type: none"><li>Elaboration of a custom test protocol to be run on microprocessors for evaluation of their robustness to errors</li></ul>	Apr-Aug 2012
<b>Red Tech Consulting (Saudi Arabia)</b> Junior consultant in a telecom consulting company for a project expanding the Saudi Internet network	Jul-Aug 2011

## RELEVANT PROJECTS

<b>Image descriptor aggregation for Efficient Retrieval (Ph.D. thesis)</b> Developed a theoretical framework for aggregation and applied insights to real-world retrieval tasks	2015-2019
<b>Efficient Panorama Database Indexing for Indoor Localization (CBMI 2019)</b> Developed an end-to-end panorama database representation to maximize retrieval speed	2018-2019
<b>Recurrent Neural Networks for Person Re-identification Revisited (MIPR 2019)</b> Proposed a simplification of an existing video representation technique while increasing retrieval performance	2017-2018
<b>Art++ (supported by the Brown Institute for Media Innovation)</b> 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	2014-2016
<b>Effective Fisher Vector Aggregation for 3D Object Retrieval (ICASSP 2017)</b> Developed an image-based retrieval system achieving high compression of a video database	2015-2016

## HONORS AND AWARDS

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

## SKILLS

<b>Programming:</b>	General purpose tools (Python, C++, MATLAB) Machine learning frameworks (Tensorflow/Keras, Torch/PyTorch, Caffe) Mobile development (Android: Java and native C++) Basics in front-end and back-end web development (HTML, CSS, JavaScript, PHP, MySQL)
<b>Languages:</b>	English (fluent); French (native); Italian (intermediate); Turkish (intermediate); Japanese (basic)