

 Julien Morat, PhD  
 Grenoble - France  
 +33 (0)6 13 16 08 81  
 julien.morat@gmail.com

# Computer Vision Engineer

## ::: curriculum vitæ :::



Online version 



### Career

 present	<b>Ambiant intelligence</b> 🔑 <b>SFM, VSLAM, Mapping.</b>
2017   2 years	<b>Immersive video</b> : immersive technologies (VR) in Kolor team ▶ Research: 16-camera rig (GoPro ODYSSEY) stitching algorithms (6-DOF video), ▶ consumer software: GoPro Fusion Studio  : stitching pipeline: multiband blending, video stabilisation, ▶ professional software: make good stereoscopic 3-D in APG  . 🔑 <b>Non-linear optimization (CERES), Camera projection models, VR, rig calibration, 3D-reconstruction, SFM, GLSL.</b>
2015   2 years	<b>Aerial imagery</b> : valorize aerial imagery for the customer needs ▶ Technical project manager for fully automated detection of vegetation intruding power lines  using aerial imagery : Technical design, production and management of on-site and offshore teams (France, India, US). ▶ Technical lead on embedded sensors : specifications, technology intelligence, sensor qualification for agriculture, energy and quarries applications. 🔑 <b>Agile/SCRUM, projective geometry, non-linear optimization (scipy.optimize), C++, Qt, OpenCv, Magick, Python, numpy, git, linux/gnu.</b>
2013   5 years	<b>3D-stereoscopic Live shooting softwares</b> : diagnose and fix 3D-stereoscopic for live shooting ▶ Real-time correction software for 3D misalignment : design and fix computer vision algorithms. ▶ Motion controlled 3D-rig equipped with variable length lenses: from mathematical design to implementation of motion control, including net protocol, and HTML5 remote control. ▶ HDR video: sensor qualification, toolkits for merging video streams into HDR video (cf. NEVEX  ). ▶ Post-production correction software for 3D misalignment : design and implementation of the UI. 🔑 <b>Projective geometry, lenses qualification, C++ (GNU/Visual), Linux , Embedded Linux, compilation (toolchain, makefile, autotools), MatLab, Python.</b>
2008   3 years	<b>PhD in Computer Vision</b> : Obstacle detection using stereovision : automotive applications  ▶ Industrial stereoscopic sensor calibration : life cycle study, Defect detection, Fallback mode  . ▶ Detection and segmentation of potential obstacles ▶ Tracking with Stereo-vision System for Low Speed Following Applications  . 🔑 <b>C++ (Visual/GNU), MatLab, Python, algorithms delivery, internal+external communications, Experimental validations.</b>
2004  6 months	<b>Research assistant</b> : interact with virtual humans 🔑 <b>C++ (visual), Facial expression detection, European project management.</b>
2003   6 + 3 months	<b>Trainee</b> : 3D reconstruction using camera cluster ▶ 3D Reconstruction using <b>colorimetry</b> .  ▶ <b>Background/Silhouette</b> learning for <b>real-time</b> 3D reconstruction 🔑 <b>Color calibration, geometrical calibration, C++, video streaming, real-time</b>

## Education



2008	<b>PhD</b> Industry sponsored*	Obstacle detection using stereovision : automotive applications.  , oral  * <b>CIFRE</b> at I.N.P.G., I.N.R.I.A. and Renault
2003	<b>Master</b>	Image, Vision and Robotic. at I.N.P.G.
2002	<b>Maîtrise</b>	Computer science at I.M.A. Grenoble
2000	<b>D.U.T.</b>	I.U.T of Computer science Grenoble

## In a few words

Projective geometry  
ImageMagick  
OpenCv  
bundle HTML5  
adjustment embedded  
optic  
GIT C++  
non-linear optimisation  
Python numpy scipy ceres

## Misc.

**Hobbies** **Paragliding**: qualified for transport of passengers, **Ski**: instructor at university

**Side Projects** **Graphic design** : logos and materials for lebipbip.com , SpotAir , mobibalises 

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