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Computer Vision Engineer

::: curriculum vitæ :::

Online version

Carrer

GoPro

Immersive video : immersive technologies (VR) in Kolor team

Non-linear optimization (CERES), Camera projection models, VR, rig calibration, 3D-reconstruction, SFM, GLSL.

2015

Delta Drone

2 years

Aerial imagery : 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.

Agile/SCRUM, projective geometry, non-linear optimization (scipy.optimize), C++, Qt, OpenCv, Magick, Python, numpy, git, linux/gnu.

2013

BINOCLE 3D

5 years

3D-stereoscopic Live shooting softwares : 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.

Projective geometry, lenses qualification, C++ (GNU/Visual), Linux , Embedded Linux, compilation (toolchain, makefile, autotools), MatLab, Python.

2008

RENAULT

Inria

3 years

PhD in Computer Vision : 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 .

C++ (Visual/GNU), MatLab, Python, algorithms delivery, internal+external communications, Experimental validations.

2004

MIRALab

6 months

Research assistant : interact with virtual humans

C++ (visual), Facial expression detection, European project management.

2003

Inria

6 + 3 months

Trainee : 3D reconstruction using camera cluster

- 3D Reconstruction using **colorimetry**.
- **Background/Silhouette** learning for **real-time** 3D reconstruction

Color calibration, geometrical calibration, C++, video streaming, real-time

Education

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

In few words

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

Misc.

Passions	**Paragliding**: qualified for transport of passengers, **Ski**: instructor at university
Side Projects	**Graphic design** : logos and materials for lebipbip.com, SpotAir, mobibalises