

# Corentin LE MOLGAT

Tél: +33 6 66 89 42 07  
corentin.lemolgat@gmail.com  
Japanese spouse visa holder

**Education**      ENSEIRB      Bordeaux, France  
09/2006–10/2009  
B.S./M.S. in Computer Science with a specialty in HPC (High Performance Computing).

## Work Experience

KELLY SERVICES AS CONTRACTOR AT GOOGLE      Paris, France  
11/2017–05/2019  
Open Source Software Release Manager

Optimization Team:

- Released several versions of `Google OR-Tools` (PyPI, Nuget, GitHub).
- Reworked and maintained the online documentation (HTML, markdown, doxygen).
- Provided support to customer (GitHub issues, Stack Overflow).
- Developed and maintained few samples (C++, Java, Python, .Net).
- Maintained the Makefile based build system (Makefile, bash).
- Developed and maintained the CMake based build system (CMake).
- Developed and maintained a public CI system (Travis CI, Appveyor, Docker).
- Provided training & support for CMake.

ALDEBARAN ROBOTICS/SOFTBANK ROBOTICS EUROPE      Paris, France  
04/2012–11/2017  
Embedded System & Computer Vision Software Engineer

System Team:

- Developed and maintained a Kernel Linux SoC Driver (C, MT9M114, OV5640).
- Developed a camera firmware flasher (Archlinux & Yocto, C++).
- Managed a contractor for an UVC compliant firmware (CMake, Docker, C++, Catch, GTest, Plantuml).

Vision Team:

- Reworked and maintained a C++ framework for multi-client access to robot cameras (CMake, C++, Boost).
- Developed tooling for a camera viewer (C++, Qt).
- Developed Modularity, a C++ computational graph framework for perception.
- Maintained the internal CI builfarm, testing and training (Jenkins, gcovr).
- Provided training & support for CMake and C++ as a senior developer.

Misc:

- Supported the vision system for the R & D team and research partners.
- Provided support on the production line, Yantai (China), 1 month.

VI TECHNOLOGY

02/2010–12/2011

R&D GPGPU and Vision System Software Engineer

St-Egrève, France

Responsible for the design and development of the whole acquisition and processing pipeline for a new AOI (Automated Optical Inspection) system for SPI (Solder Past Inspection) running on Linux (Fedora).

Software lead for the hardware acquisition system integration (Vertex-6 Card on PCIe):

- Managed the integration of the FPGA.
- Defined the protocol between the Kernel and the acquisition card.
- Developed the Kernel device driver (C).
- Developed debugger tools (C++, Qt).

Software lead on the image pipeline:

- Developed a C++ middleware to grab and manage images from several dozens of image sensors.
- Managed two co-workers to speed up development (roadmap, code review, scrum master).
- Developed a 2D camera image viewer (C++, Qt, OpenSceneGraph).

Software lead on the GPGPU post-processing pipeline:

- Ported the 3D reconstruction algorithm (Matlab) to a dual-GPU System (CMake, C++, CUDA 4, GTX 480) and speed it up from 15s to 7ms (x2000!).
- Developed a CMake cross toolchain for managing CUDA files.
- Developed a 3D PCB viewer (after 3D reconstruction) using (C++, Qt, OpenSceneGraph).

Various support as technical lead on GNU/Linux:

- CMake training & support.
- Jenkins training & support (POC, setup, design).
- Linux training & support (Bash, Fedora) (everyone else was on Windows).

KYUSHU UNIVERSITY

04/2009–10/2009

Fukuoka, Japan

Engineering intern at I.R.V.S. (laboratory for Intelligent Robots & Vision System)

- Design (UML), implementation (C++) and tooling viewer (C++, Qt) of a 3D human pose estimation using non-parametric belief propagation algorithms and multiple 2D video cameras.

KYUSHU UNIVERSITY

06/2008–09/2008

Fukuoka, Japan

Engineering intern at I.R.V.S. (laboratory For Intelligent Robots & Vision System)

- 3D Reconstruction on GPU (GLSL) and tooling viewer (C++, Qt) using stereovision algorithms and four 2D video cameras.

## Skills

*Competence:* Programming, CI, Documentation, Tooling, Image Pipeline, Drivers, Robotics

*Programming Languages:* Bash, Kernel C, C++, Python, Java, .Net, Docker

*Programming Libraries:* STL, OpenCV, Boost, V4L2, ffmpeg

*Extra Interests:* Android, Vulkan, Spir V

*Languages:* French (native), English (fluent), Japanese (beginner), Spanish (beginner)

## References

**Dr. RABAUD Vincent**

Google, Inc.

vrabaud@google.com

**Dr. PERRON Laurent**

Google, Inc.

lperron@google.com

*Last update: September 10, 2019*