

# Corentin LE MOLGAT

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## Work Experience

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### Adecco, Contractor at Google LLC

*Open Source Software Developer*

### Kelly Services, Contractor at Google LLC

*Open Source Software Release Manager*

Optimization Team:

📍 Paris, France  
📅 01 2020 - 06 2021  
📍 Paris, France  
📅 11 2017 - 05 2019

- Released several versions of [Google OR-Tools](#) (PyPI, Nuget, GitHub).
- Reworked and maintained the [online documentation](#) (HTML, markdown, doxygen, pydoc).
- Developed and maintained the three build systems (Bazel, CMake, Makefile).
- Developed and maintained samples (C++, Java, Python, .Net).
- Developed and maintained the public CI systems (GitHub workflow, Travis CI, Appveyor, Docker, Vagrant).
- Provided support to customer (GitHub issues, Stack Overflow, Discord).
- Provided training & support for CMake.

### Aldebaran Robotics/SoftBank Robotics Europe

*Embedded System & Computer Vision Software Engineer*

System Team:

📍 Paris, France  
📅 04 2012 - 11 2017

- 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

*R&D GPGPU and Vision System Software Engineer*

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):

📍 St-Egrève, France  
📅 02 2010 - 12 2011

- 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

*Software Engineering intern*

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

📍 Fukuoka, Japan  
📅 04 2009 - 10 2009

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

## Kyushu University

*Software Engineering intern*

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

📍 Fukuoka, Japan  
📅 06 2008 - 09 2008

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

## 🎓 Education

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### ENSEIRB-MATMECA

*B.S./M.S. in Computer Science,  
specialty in HPC (High Performance Computing)*

📍 Bordeaux, France  
📅 09 2006 - 10 2009

## 📋 Skills

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- *Competence:* Programming, CI, Documentation, Tooling, Image Pipeline, Drivers, Robotics
- *Programming Languages:* Bash, Kernel C, C++, Python, Java, .Net, Docker
- *Programming Libraries:* STL, Qt, OpenCV, Boost, V4L2, ffmpeg
- *Languages:* French (native), English (fluent), Japanese (beginner), Spanish (beginner)

## 👤 References

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- 🎓 **Dr. RABAUD Vincent**  
📁 Google LLC  
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- 🎓 **Dr. PERRON Laurent**  
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