Corentin LE MOLGAT

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Mizux — Mizux

Work Experience

Adecco, Contractor at Google LLC — Paris, France
Open Source Software Developer — 01 2020 - 01 2021
Kelly Services, Contractor at Google LLC — Paris, France
Open Source Software Release Manager — 11 2017 - 05 2019

Optimization Team:

- 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 — Paris, France
Embedded System & Computer Vision Software Engineer — 04 2012 - 11 2017

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 — St-Egrève, France
R&D GPGPU and Vision System Software Engineer — 02 2010 - 12 2011

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 — Fukuoka, Japan
Software Engineering intern — 04 2009 - 10 2009

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

- 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 — Fukuoka, Japan
Software Engineering intern — 06 2008 - 09 2008
Engineering intern at I.R.V.S. (laboratory for Intelligent Robots & Vision System).

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

Education

ENSEIRB-MATMECA — Bordeaux, France
B.S./M.S. in Computer Science,
specialty in HPC (High Performance Computing) — 09 2006 - 10 2009

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

References

- **Dr. RABAUD Vincent**
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- **Dr. PERRON Laurent**
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