Michele Bianchi

C++ Software Engineer with 5 years of SDK, embedded systems, and simulation development in an R&D environment, 2 years of academic research

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EXPERIENCE

Ascent Robotics — *Senior Software Engineer*

TOKYO (JAPAN) — NOVEMBER 2017 - PRESENT

- Involved in the design and development of a 3D simulator in Unreal Engine 4 for autonomous driving R&D, used by the company research team to train and validate autonomous driving models in a distributed environment.
- Integrated RPC and MSGpack in the simulator to allow external control of the simulation, effectively providing a remote interface for all in-house simulators
- Handled multi platform deployment of the simulator, while also maintaining the CI pipeline, allowing it to be used on both Windows and Linux.
- Lead a 4 person team for a scenario generation project for distributed adversary training, removing the need of manual creation of maps
- Handled fixing, automatization, containerization and CI for a semantic map importing pipeline for an OpenSource simulator, removing all manual steps for internal distribution of ML training and validation maps
- Implemented an import and distribution pipeline for 3D assets for a machine learning training simulation for robotics, allowing for extending the data generation to the end user without the use of Unreal Editor

FLIR Integrated Imaging Solutions — *Software Developer, C++*

TRENTO (ITALY) — JULY 2015 - OCTOBER 2017

- Developed a multiplatform application using Qt 5.7 to demonstrate the capabilities of FLIR's Triclops SDK for stereo camera interfacing and depth computation, using OpenGL for point cloud visualization
- Released a new major version of Triclops SDK by integrating OpenCV in stereo techniques, reimplementing core routines in Intel SIMD, and improving the company's stereo process speed by 22% and valid disparity pixel by 28%
- Overhauled build system, cutting the build time by almost a half, and standardized packaging to the official Debian guidelines
- Tested multiple stereo-based depth reconstruction algorithms on PC and assisted in their deployment on an FPGA SoC for a smart camera product

University of Trento — *PhD Student*

TRENTO (ITALY) — NOVEMBER 2012 - JUNE 2015

- Computer Architecture teaching assistant, handled all practical content of the course, wrote teaching material, prepared and graded exams for 150 students/y
- Visiting Junior Researcher at Tokyo Institute of Technology, developed a prototype in Unreal Engine 4 for body-area network motion tracking data rendering

EDUCATION

University of Trento — *M.Sc. Computer Science*

TRENTO (ITALY) — SEPTEMBER 2010 - SEPTEMBER 2012

- 4 months at Technical University of Denmark (DTU)
- 90th percentile in Computer Graphics, Game Prototyping and RTOS

SKILLS

C++

GNU/Linux

Multiplatform development

Git

Build systems

Unreal Engine 4

Real-time image processing

Shell scripting

Software development life cycle

Qt

AWARDS AND PUBLICATIONS

Jury Prize at CHIPlay 2014 Student Game Competition
"OHR and Radiant Square"

Serious Games for Large-Scale Image Sensing
International Conference on Serious Games (2016)

OHR
Proceedings of the first ACM SIGCHI annual symposium on computer-human Interaction in Play (2014)

Tangible and Graphical Game Interfaces: An Experimental Comparison
Games User Research: A Case Study Approach(2017)

INTERESTS

Videogames, Anime, Japanese, Mechanical Keyboards, Travelling