

IONUȚ CAVA

Bristol, U.K

Nationality: Romanian

Experience and skills

Programming experience:

C/C++ (w STL & Boost libraries)	4+ years commercial ~10+ years independent
C# & Java (including Android SDK)	1 year commercial (3 years academic)
PHP + SQL + HTML4.x w/ JavaScript & XML	Mix of academic and commercial
VB (6, .NET), ASM, LiSP, LUA, Python	Mix of academic and commercial

Technologies and work environments:

- **OpenGL** (independent and academic experience including AZDO principles)
- **MS Visual Studio** 20xy (main development environment, experience starting from ver. 2005)
- **Unity 2017** (main game development environment at Reach Robotics)
- **Linux** (3+ years commercial with Debian, Fedora and Ubuntu distributions).
 - C/C++ development under Code::Blocks, Eclipse & gcc/g++ with Makefiles.
- **CMake** build system basics (using Cmake-GUI).
- **Revision control** (both Subversion and Git)
- **Mathworks Matlab** and **Wolfram Mathematica** (2 years of academic experience with each).

Analytical and software development skills:

- As a Computer Science undergraduate student, I spent most of my study time programming highly specialized applications and trying to find optimal solutions for a broad range of computer and mathematical problems and tasks, helping me gain analytical and generic problem solving experience;
- Able to quickly adapt to new technologies (Unity, C#, Java, PHP, Python, Lua, etc.). This proved to be a valuable skill at each new workplace as it allowed me to work with support tools and build systems with minimal training.
- Studying for a master's degree in virtual reality and computer graphics, I developed my own virtual environment framework that I would later adapt for every specific course my studies implied. It covers A.I. (GOAP based), command based rendering, physics, networking, multi-modal input and sound processing. This helped me gain practical skills in C/C++, OpenGL, OOP (including most common design patterns), multi-threading, Boost libraries and various other technologies and principles. Because it was used as inspiration for other projects by students, both Romanian and international, the framework became an open-source project under the MIT license.

Team player:

- Member of a small, 4 man, indie development team creating 3D software. (Divide-Studio)
- Member of a young students in Informatics team between 2001- 2003 and a local Judo club 2002 – 2006, heavily reliant on members' team play and cooperation.
- Worked in a 5 man construction team on a personal building project.

Studies and Qualifications

2010 - 2012: “Ovidius” University, Constanța, Romania,
MSc: Multi-modal distributed virtual environments

- **Subjects covered:** Augmented and Virtual Environments, Applied A.I., Distributed Algorithms, Automatic Processing of Natural Languages, Advanced Image Analysis and Reconstruction
- **Dissertation:** Simulating a military strategy in an agent-based virtual environment.

2007 – 2010: “Ovidius” University, Constanța, Romania,
BSc: Computer Science and Applied Mathematics

- **Subjects covered:** Design Patterns, Optimisation Techniques, Computer Networking, CAD, Software Security, Database Management Systems, Computational Geometry, Computer Architecture, most fields of mathematics (multiple courses in Geometry, Calculus and Algebra).
- **Bachelor thesis:** Dynamically generated and animated vegetation in a virtual environment.

2003 – 2007: “Brad Segal” College, Tulcea, Romania
Specialisation in Computational Technologies

- **Subjects covered:** Digital & Analogue Electronics, Database Management, Web Technologies.

Employment History

September 2017 - Present: Game Developer at Reach Robotics
(<https://www.reachrobotics.com/>)

- C# Game Development
- Unity Development

November 2014 – September 2017 : C++ Developer at Cabot Communications
(<http://www.cabot.co.uk/>)

- Embedded software development for Smart TVs and Set-Top-Boxes
- Development of a custom implementation of Android TV

June 2014 – November 2014 : C# Developer at DAC Beachcroft LLP
(<http://www.dacbeachcroft.com/>)

- Work on internal case management systems. (bug fixes and enhancements)
- Offer developer support to the users of the internal systems.

October 2010 – Present (Off-hours): Independent C++ Programmer at Divide Studio
(<http://www.divide-studio.com>)

- Developing an open-source, virtual environment development framework in C++.
- Offering technical support and implementation details on request.

September 2013 – March 2014: Game Programmer at Gameloft S.A., Bucharest Studio**(<http://www.gameloft.com>)**

- Android debugging and development (C++ and JNI) for Brothers in Arms 3 (cancelled project)
- C++ developer and UI scripting / stat system balancing in LUA for Captain America 2 (credited)

June 2012 – January 2013: Freelance construction worker

- Member of a 5 man construction team tasked with extending a private house.
- Responsible for designing and implementing the electrical system in said house.

February 2010 – May 2010: PHP programmer at RS MEDIA SOFTWARE**(<http://www.rsjoomla.com>)**

- Developed and debugged commercial Joomla components using PHP + SQL + AJAX.
- Worked on “RSFeedback!” component that offered a forum-like, heavily AJAX based UI.

July 2009 – August 2009: Hardware Technician at eXtrem Computers, Tulcea**(<http://www.x3m.ro>)**

- Hardware, Software and Networking support and service.

Additional Information**Language ability:**

- Native Romanian speaker
- Proficient in English
- Beginner in Spanish and French.

Miscellaneous information:

- Studied electronics for 4 years and computer science for 2 as extracurricular activities during high school.
- Ionut is pronounced "Yon-oots" and is the diminutive of John (Ion) (the English equivalent being Johnny)