

## Personal Information

Nationality	Languages	Personality Type	Website	E-Mail
Polish	Polish (native), English (fluent), Russian (minimal)	<a href="#">INTP</a>	<a href="http://ghassan.pl">ghassan.pl</a>	<a href="mailto:ghassan@ghassan.pl">ghassan@ghassan.pl</a>

## Professional Experience

### Programmer at [Teyon](#)

**October 2009 - August 2014**

#### Game design and development

Multiple games utilizing several different game and graphics engines, both provided in-house as well as custom-made; Games for resource-constrained devices like the Nintendo DS/3DS, iPhone/iPad; Games for the browser (Flash/ActionScript); Some technologies for said games (e.g. GUI and animation libraries, localization libraries); Development primarily with C/C++, with some scripting languages (Lua and Python)

#### Engine design and development

Developing and improving numerous aspects of the in-house game engine (software/hardware rendering, asset loading, OS/API integration) for different platforms (DS/3DS, iPad/iPhone, PC with OpenGL); Working under tight resource and hardware constraints; Designing and developing a custom game engine for multiple platforms (PC, Mac, Linux, iOS), both the frontend (asset loading/parsing, game structure, scripting) as well as the backend (rendering, filesystem, debugging/logging, threading, memory management, sound playback, platform/locale interoperability, social APIs)

#### Tool design and development

Design and creation of both tools for personal use as well as tools for internal company game design and creation, e.g. a game creation and build tool for a specific genre, built in C#

#### Network administration

Simple network and server configuration management, web and VCS server setup

#### Code maintenance and porting

Fixing and maintaining existing codebases; porting games from PC to the Nintendo DS/3DS and iPhone/iPad

Note: I was not involved in development of "Rambo, The Video Game"

### Software Engineer at [Mobica](#)

**January - September 2014**

#### Project design and development

Work on multi-platform software for dedicated embedded multimedia hardware; design of interfaces and module interoperability layers

#### Embedded OpenGL profiling and optimization

Writing profiling code for rendering system for real-time data visualization on embedded hardware; creating proposals for, and implementing generic, as well as GLES3-specific optimizations

#### Consulting with international clients

International travel to client sites for consulting purposes; integration with client team and workflow

Note: Most of the above deliberately vague on account of strict project security and non-disclosure agreements

### Gameplay Programmer at [IntoXicate Studios](#)

**October - December 2014**

#### Game and engine programming

Work on **Afterfall: Reconquest**; work in Unreal Engine 3, both with UnrealScript as well as C++ engine source code; adding gameplay and UI features; creating and modifying tools; refactoring legacy code; Unreal build system work; external module integration (Bink, Steam)

#### Bug fixing and optimization

Bug fixing and simplification of legacy code (AI, gameplay, UI); work with existing developers to improve overall code quality; rendering and resource management optimization (Unreal Engine, C++, UnrealScript)

#### Game and level element design

Improvements to existing gameplay and level elements; design of new gameplay elements; work with level designers and artists on implementation details; across-the-board work in Unreal Editor and associated tools

#### VCS setup

Setup of, and transitioning to, Mercurial-based source code versioning system; developer training

#### Website re-write

Porting of Afterfall: Reconquest website from unnecessarily complex and static CMS version, to a simple, personal CMS solution (PHP, MySQL, HTML+CSS+JS, UX)

### Programmer at [QLOC S.A.](#)

**August 2015 - March 2016**

#### Game porting and internationalization

Porting games from PlayStation 4 to PC with Steamworks; input handling and translation between keyboard and gamepad; handling of multiple different input devices

#### Bug fixing

Code cleanup and refactoring; bug and porting issues fixes; investigation into PC compatibility issues, eg. FPU/vector processing issues

#### Tool development

Writing a custom binary archive/resource reader/viewer for baked and precompiled game data

**Senior Software Engineer at [Harman Connected Services](#)****January - March 2017****Tool development**

Maintenance and improvement of C#/XAML audio tools built using the MVVM and IoC patterns; both front-end and back-end work; communication with external audio framework via different generic as well as automotive-specific protocols; bug fixing

**Communication protocol development**

Helping improve communication protocols for the full stack of user <-> vehicle technologies; improving tools for simulating/debugging said stack

**Documentation**

Collating and compiling the knowledge base on a large, multi-team project; creating hyperlinked diagrams of the various levels of the project, from the most general to the most specific; collaborating with other teams and team members to share and expand the knowledge and fill missing gaps

**Consultations**

Advising clients and product owners on best hardware and software solutions; rapidly acquiring new technical knowledge to improve the accuracy of the advice

**Skills and Knowledge**

**Legend:** 90% - idiomatic knowledge and writing skill; 70% - comprehensive knowledge and ability to write correct programs; 50% - ability to write correct programs; 30% - able to read and reason about most constructs; 10% - able to understand the basic idea behind a language/technology and recognize some constructs

**Programming Languages**

C/C++ (C++98, C++11, C++14, C++17)	90%
C++98	90%
C++11	90%
C++14	70%
C++17 and beyond	50%
C89	70%
C99	40%
C11	30%
C++ Standard Library	80%
Boost	40%
Lua	80%
JavaScript, HTML+CSS	70%
C#	60%
Java, PHP	40%
Smalltalk	40%
Linux Shell Script	40%
Pascal variants	35%
Python, ActionScript, SQL variants	30%
Objective-C, Assembly variants, Basic variants	30%
Erlang, Go, Rust	<= 20%

**Programming Paradigms & Domains**

Imperative/Procedural	90%
Object Oriented	80%
Event Driven, Declarative, Network	50%
Resource Constrained	40%
Functional	40%
Data Driven, Security	30%
Database	20%

**Technologies & Frameworks**

OpenGL	80%
OpenGL 2/3	70%
OpenGL 4	50%
OpenGL ES	70%
OpenGL ES 2/3	50%
WebGL	40%
GLSL	40%
DirectX	30%
HLSL	10%
SDL/SDL2	85%
WinAPI, .NET	70%
Windows Forms	60%
Unity Engine	50%
Flash	40%
Steamworks API	40%
iOS & Android Store API	30%
Unreal Engine 3/4	20%

**Tools & Software**

Visual Studio	80%
gcc	50%
gdb	40%
CMake	30%
Rational Software Architect: Real-Time Edition	40%
Unix/gnu utilities	50%
Mercurial	60%
git	50%
Perforce	40%
Jira	70%
Trello	60%
Confluence	50%

**Education****2004-2008**

Stanislaw Wyspianski High School, Lodz, Matura Exam

**2008-2009**

University of Lodz, Faculty of Physics and Applied Informatics, field of study: Informatics/Computer Science

**2009**

Lodz University of Technology, Faculty of Technical Physics, Information Technology and Applied Mathematics, field of study: Computer Science

**Interests & Hobbies**

- Game design, development and analysis
- Tabletop games
- Information technology and programming
- Speculative fiction
- Philosophy