

PERSONAL INFORMATION

Nationality	Current Residence	Languages	Personality Type	Website	E-Mail
Polish	Łódź, Poland	Polish (native), English (fluent)	INTP	ghassan.pl	ghassan@ghassan.pl

PROFESSIONAL EXPERIENCE**Senior Software Developer at Snowed In Studios****2022 - 2024****Tool development**

Work on custom game- and engine-related tools for Unreal Engine game development, mostly relating to internal engine aspects (performance, asset packaging, game introspection)

Unreal Engine 4/5 consulting

Advising clients on issues relating to Unreal Engine, in particular: explaining and reducing differences between projects in Unreal Engine and Unity; preparing games for porting to different platforms (PS4/PS5/XSX/HTML5) and advising on platform limitations, requirements, and changes needed; helping with portability of plugin code between different versions of Unreal (between 4.26 and 5.3)

Research and documentation

Research into various topics relating to Unreal Engine and target platforms for client projects; writing comprehensive documentation, for research conclusions as well as describing the codebase and rationales for decisions made

Mentoring and judging

Mentoring of final-year Algonquin College game development students and their capstone projects, advising in programming and game design topics; judging game development competitions for multiple higher-learning institutions

Game Designer / Developer at Teyon**2018 - 2019****Game design**

Creating a game design document for a 2D Metroidvania for a licensed IP; Creating a game design document for an original action platformer; Creating multimedia presentations to promote the above games to investors/publishers; Creating the design for a small internal prototype project; Leading the game design team and meetings during the pre-production of the projects; Consulting with other team members on game design

Game development

Work on minigames for a minigame collection game in Unity; Prototyping a multiplayer game network engine; Creating movement systems for platform games with arbitrary geometry

Game porting

Porting Unreal Engine 4 game to Nintendo Switch

Supervision

Supervision and mentorship of interns and workshop attendees; Producing and advice on projects created by student workshop attendees

Translation and editorial work

Editing, correction and translation work on several games (Polish \leftrightarrow English)

Other

Judge for the Team Game Development Competition at the IT Institute of the Faculty of Technical Physics, Computer Science and Applied Mathematics (FTIMS) at the Lodz University of Technology (purely in English)

Senior Software Engineer at Harman Connected Services**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 \leftrightarrow 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

Programmer at QLOC S.A.

2015 - 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, e.g. FPU/vector processing issues

Tool development

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

Gameplay Programmer at IntoXicate Studios

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)

Software Engineer at Mobica

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

Programmer at Teyon

2009 - 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





















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++11	C++14	C++17	C++20	90%
	C++ Standard Library					80%
	C++23					60%
	Boost					40%
	ANSI C					70%
	C99					40%
	C11					30%
	Lua					80%
	JavaScript ES2015-ES2022					70%
	HTML CSS					70%
	C#					60%
	SQL					50%
	Linux Shell Script					40%
	x86 assembly ARM assembly					40%
	SIMD extensions					30%
	Pascal Object Pascal					30%
	Python					30%
	Smalltalk					30%
	BASIC					30%
	Rust					10%











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%
	DirectX 12					10%
	HLSL					10%
	Vulkan					10%
	SDL/SDL2					80%
	WinAPI					70%
	WinRT					20%
	.NET					70%
	WinForms					60%
	Unreal Engine 4, 5					60%
	Unity					50%
	Steamworks API					40%
	Node.js Blazor React					20%

Paradigms & Domains

	Imperative Procedural Structured					90%
	Object Oriented					80%
	Declarative					50%
	Network					50%
	Soft Realtime					50%
	Resource Constrained					40%
	Functional					40%
	Data Driven					30%
	Security					30%
	Database					20%

Tools & Software

	Visual Studio Visual Studio Code					80%
	gdb					40%
	CMake					30%
	Unix/gnu utilities					80%
	Mercurial					60%
	git					50%
	Perforce/HelixCore					40%
	Jira					70%
	Trello					60%
	Confluence					50%

OTHER

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 AND HOBBIES

- Game design, development, and analysis
- Tabletop games
- Information technology and programming
- Computer and programming language history
- Programming language design
- Speculative fiction
- Philosophy

LEGAL

ENGLISH

I hereby agree for my personal data, included in my job application, to be processed in line with the current and future needs of recruitment, in accordance with the General Data Protection Regulation of 27 April 2016 (EU Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016, article 6, paragraph 1, point (a)).

POLISH

Zgodnie z art.6 ust.1 lit. a ogólnego rozporządzenia o ochronie danych osobowych z dnia 27 kwietnia 2016 r. (Dz. Urz. UE L 119 z 04.05.2016) wyrażam zgodę na przetwarzanie moich danych osobowych, zawartych w tym dokumencie, dla potrzeb aktualnej i przyszłych rekrutacji.