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Year of birth

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TL;DR

Have been programming since 1985 (professionally since 1992), both in and out of the Games industry; mainly in *C/C++* but also *C#*, *Java*, *Python* and *Typescript*. Love software design from machine code level up to build systems and testing.

Experience Overview (Recent first)

Scapin Labs: Main programmer at a startup, developing a mobile AR/AI app in *Unity (C#)* and *typescript* on the backend.

Electrolux: Consultant work; rewrote/refactored an "appliance simulator" mobile SDK from *Java* to *C++*, including unit tests and documentation.

Unity Technologies: Worked on the Android/Mobile team doing *C++/C#* development and Android bug fixing.

King: Worked on several games, including the first Facebook game *Bubble Saga* and at the end in the "Growth" team, doing *C++* development for *Candy Crush Saga*.

Swimsuit Boys: Started and ran a company together with a few colleagues where I designed and implemented a virtual machine and server for platform independent multiplayer gaming on pre-smartphone mobiles.

Digital Illusions: Worked as a render programmer on the PS2 team and then on the PC *Battlefield 2* team, dealing with things like realtime water and the lightmap renderer.

Amuze: Worked on *Headhunter*, a major Dreamcast and PS2 title published by *Sega Europe*. Main tasks included porting *Headhunter* to PS2 and writing the multiplayer/network portion for the Dreamcast-version.

Detailed Experience

Scapin Labs (2021-2024)

Main Tasks

- AR Face tracking and Network programming (low latency synchronization of face expressions etc)
- Unity script language extension with ability to use Unity API at runtime.
- GPT streaming with Text to speech and Voice to text, minimizing round trip from user speaking to AI answering.

Worked at a startup that tried to create a mobile/social (metaverse like) avatar chat application, involving things like customizable (3D) avatars, multi user rooms, face tracking, voice chat, AI avatars, voice to text and text to speech.

We used Unity (plus some native parts in C/C++ & Objective C) on the frontend and Firebase (with typescript) on the backend.

Electrolux (2018-2021)

Main Tasks

- Portable Java/C++ development
- Java refactoring
- High coverage unit testing
- Exploration and documentation of institutional knowledge.

Was tasked with rewriting a legacy SDK implemented independently in Swift (for iOS) and Java (for Android) into a single, portable C++ library.

Involved careful refactoring of Java code to be able to isolate parts that could be moved over to C++ gradually. Also involved careful unit testing to prove the new implementation worked, and understanding and documenting the domain.

Unity Technologies (2014-2018)

Main Tasks

- Application development in C#/C++ and Java
- Android Bug fixing
- Wrote *Fastzip*, A very fast zip packer/unpacker that could also sign Android APKs on the fly; <https://github.com/sasq64/fastzip>

King (2010-2014)

Main Tasks

- Flash & C++ games programming

Wrote the flash games *Farm King* and *Circus Surprise*, then joined the team developing the first Facebook Saga game, *Bubble Saga*. Worked on a canceled Hidden Object game based on Sherlock Holmes, and finally worked for a while on the so called Growth team where I did C++ programming for *Candy Crush Saga*.

Swimsuitboys AB (2006 -2010)

Main Tasks

Design, implementation and documentation of a technology named Swimmer, a Virtual Machine for small devices. C++, Python and Java/J2ME.

Swimsuit Boys was a company I started together with a few old colleagues, to develop a technology I had started on my spare time; A thin client application with a fast virtual machine, and a server infrastructure that could send down code and data to connected clients.

The old specification can be found here;

<https://drive.google.com/file/d/0BxReCPuJN0v5WXZLTzYxaXM4QUdHeXJPSWgzOVFYN2hZcG1n/>

Sightline Vision (Nov 2005 - Nov 2006)

Main Tasks

- Develop an application for 3D visualization from scratch.

After Battlefield 2 was complete, I left for a smaller company that did 3D visualization, mostly of infrastructure like housing areas, airports etc. There me and the two other programmers started developing a replacement for the old application used for displaying these visualizations. Tasks included core functionality like resource, document and configuration handling - as well as advanced 3D programming like realtime (cascaded) shadow maps and tree/forest rendering (using Speedtree).

Digital Illusion (Nov 2003 - Oct 2005)

Main Tasks

- Worked on the startup of a new PS2 project and examined different platforms/middlewares to use.
- Worked as a render programmer for Battlefield 2 (PC).

I left Amuze (as many had previously and many since) because of what had become an unbearable work situation and was offered a position at Dice to help start up a new PS2 project. After several months this project was canceled however, and I was moved over to the Battlefield 2 team, where I worked in the rendering team, working on things like the lightmap renderer and the realtime water.

Amuze V2 (Aug 2002 - Oct 2003)

Main Tasks

- Core functionality in the engine for the game Headhunter: Redemption

After returning from England I went back to Amuze who had just started up again in it's new form. For the sequel to Headhunter, instead of writing everything ourselves a lot of third-party products was used. Renderware and Renderware Studio from Criterion was chosen, together with other game middleware such as Karma (for physics) and Kynogon (for AI). I have mostly been working on core functionality such as the texture cache/streaming, memory system, a visibility manager and PS2-specific parts.

Reflections Interactive (Jan 2002 - Jun 2002)

Main Tasks

Writing a spline road renderer for Driver 3

After Amuze had to let everyone because of economical problems I choose to move to England to start work as a render programmer for Reflections Interactive in Newcastle (Creators of the Driver games, and recently Stuntman). I was assigned to writing the spline renderer for the roads in Driver 3. However, I did not enjoy England at all and unfortunately I had to resign after only 5 months.

Amuze Electronic Media (May 2000 - Dec 2001)

Main Tasks

- Network Programming for the Dreamcast version of Headhunter
- Porting Headhunter from Dreamcast to PlayStation 2

When I started at Amuze I jumped right into the development of Headhunter, one of Sega Europe's biggest productions. After working on smaller tasks in the game-engine, my previous work with network programming got me assigned to the task of writing the multiplayer portions of Headhunter. However, due to financial problems, Sega decided to cut the multiplayer gaming in favor of a PS2-port. Even though I was sorry to leave the nearly finished online racing code and server behind, I quickly set myself out to learn the PS2-hardware. The last months at Amuze I ported most of Dreamcast 3D-engine to PS2, learning a lot about porting between different hardware in the process. Finally, as we could move some people over from the Dreamcast-version, I also had to act as a teamleader for other programmers while still trying to maintain focus on programming.

Upright Technology (Apr 1997 - May 2000)

Main Tasks

- Middleware and Database service programming in C/C++
- Some Java programming (Applets and Java Server Pages)

I left Webray for Upright, a more traditional IT-company, where I worked on many different projects. These included:

Ericsson

Short project to rewrite/update parser software used for switchboard development.

ABB Lummus Global

Upright was a sub-contractor for ABB Lummus Global, who in turn had the gigantic task of upgrading and modernizing the oil facilities of Lagoven, the Venezuelan state-owned oil company. I worked mostly with the middleware (Tuxedo from BEA), the layer of service-routines that dictated the access to the database.

RFV

I worked together with a lot of other programmers and people from RFV to modernize the case handling system for the Swedish National Security organization.

OK/Q8

A prototype for a car-rental system that I was a project-leader for but which wasn't finished by the time I left the company.

Spray

I worked on their WAP-portal, writing java server pages for spray mail and such.

Webray Operator Systems (Fall 1992, Mars 1994 - Apr 1997)

Main Tasks

- Low-level (Assembler, Pascal, C) communication and measurement programming

Webray was a company that developed software and sold measure-instruments to the paper industry. My work mainly involved writing communication-software that parsed measurement data and made them available to windows-clients, but I also wrote a lot of low-level code to actually perform the measuring - both in x86 assembler and stranger languages like Forth (!) and PLC (Programmable Logic Circuits) assembler. The job also involved a lot of on-site programming and support which could be exiting at times, especially since a programming error could cut the paper and stop the machine which usually cost the paper company around \$10000 - \$15000 per hour.