Christian Laforte Deep3D.ninja/contact

Started 3D graphics software development consultancy, resulting in $1.1M profit within 3 years from repeat customers such as Sony, Google, Autodesk. Sold and developed $M+ mission-critical, real-time 3D software for security, defense, smart cities.

I adapt easily to new environments and challenges. I dislike chit-chat but enjoy problem-solving discussions with people of all kinds, e.g. technical experts to C-level execs.

Fluent in English, French. Intermediate Japanese (5000 words, 2000 kanjis). Family willing to relocate to Toronto or Japan. My wife is Japanese.

3D and AI programming at *Deep3D.ninja*   Montreal, from April 2018

Part-time consulting with start-ups and researchers, while working on personal software development projects (mostly Deep Learning with PyTorch and fast.ai). I'm not in a rush. I'm open to more consulting assignments or a full-time position, if the opportunity arises to make a large positive impact.

CTO and Founder at **Fortem**   Montreal, 2016 - 03/2018

Assisted new CEO - sold Asia division for $2.65M. Kept small core team during a very challenging time.
Managed a handful of projects in smart city, aviation security, defense. Developed Deep Learning prototypes with Keras, Python. Evaluated and integrated Face recognition 3rd-party library. Improved C++, Qt, OpenGL and Javascript client code.

Met strategic customers to research their needs, validate new ideas. Researched and developed prototypes, e.g. Holographic 3D Op Center[1] using Unity and C#. Ran experiments to improve market fit. Authored detailed proposals, presented online and in-person.

CEO and Founder at **Fortem**   Montreal, 2010 - 2015

We developed the Omnipresence 3D Security Management Software for security-critical organizations. This mission originated from a school shooting at my alma mater. Our solution:

- ✓ Seamlessly integrates 57 leading brands of security, automation and IT equipment: video cameras and recorders, access control, analytics, GIS, GPS, radar, sonar, gunshot detection, etc.
- ✓ Alerts users of abnormal situations and provide the most relevant and actionable information needed to make timely and correct decisions.
- ✓ Features unique Immersive 3D technology that eliminates manual steps to react to incidents faster.

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[1] Demos videos: http://deep3d.ninja/portfolio/omnipresence-3d/, http://deep3d.ninja/portfolio/omnipresence-3d/
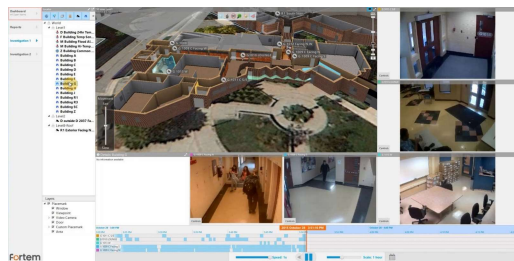
We had a great team but still I had to wear many hats. I personally:

- Did first-hand market research and validation, identified long-standing problems that could be resolved with our 3D expertise
- Raised $4M, built teams in Montreal (25 at peak) and in Singapore (8)
- Negotiated and sold critical projects, from $170K first customer (university), to $3.7M defense project covering 37 bases, thousands of cameras, tracking of 1M personnel.
- Convinced customers. 20+ trips overseas to Singapore, Saudi Arabia, UAE, Taiwan, etc.
- Presentations and proposals, analyzed and confirmed requirements, negotiated contracts, agreed on design, pass acceptance tests
- Managed product evolution, e.g. wrote high-level requirements, lead UX design team, proposed creative solutions to complex problems and to address new risks and surprises
- Co-authored 3 patents that increased competitive advantage)
- Produced the most critical marketing material, e.g. recent web site content and videos.

At the end of 2015 I lead a financial re-org, helped recruit a new CEO so I could focus on the product development and optimizing our software for our most strategic customers.

CEO and Founder at Feeling Software   Montreal, 2005 - 2009

We developed custom 3D graphics software for demanding customers like Google, Sony, Autodesk. Starting from scratch, I sold and negotiated our 50+ contracts for 35+ customers, did all the marketing, some project management, hiring, coaching, (rare) firing. By 2008 we made $1.1M profit that we re-invested into our 3D Security software. I personally developed the software for some complex projects, e.g.:

- ✓ For **Sony** and **Autodesk**, involved in COLLADA 3D file format standardization (within Khronos), developed file translators for Autodesk 3ds Max and Maya. I personally re-wrote the Maya translator. These products were open- source. 30,000 active subscribers within 3 years, mostly game developers.
- ✓ For AGEIA (later acquired by **NVIDIA**), helped standardize real-time physics (rigid body dynamics, rag dolls) within COLLADA. I integrated the PhysX engine in Maya.
- ✓ For Deep Light (autostereoscopic 3D display), I developed a Maya plug-in and an OpenGL driver to render 9 different viewpoints in real-time - supported AAA games of the time.

Recruited top developers (12 at peak) to complete more projects:

- ✓ For **Google** Lively, developed a COLLADA importer, supported animated 3D characters. Similar repeat contracts with Epic Games, etc.
- ✓ For **Adobe**, helped integrate 3D into Photoshop.
- ✓ For **Canadian Space Agency**, developed 3D engine for the International Space Station simulator.
- ✓ For **Apple**, ported and optimized iTunes 3D visualizers on Windows.
- ✓ For **Trimble**, developed GPU-accelerated point cloud processing and 3D surface reconstruction algorithms from LIDAR.

I presented at **SIGGRAPH**, **GDC**, Autodesk developer conferences. We also developed internal projects:

- Prototyped e-commerce and browser-based 3D home design and visualization.
- 3D reconstruction pipeline that created fully-textured 3D models from photos. State-of-the-art at the time, e.g. point and line feature descriptors, pose estimation, advanced RANSAC, surface reconstruction from sparse data, etc.

Director of R&D at Dakis Decision Systems   Montreal, 2003 - 2005

Provided guidance and leadership to a diverse and talented group of developers. Personally:

- Developed 3D animated avatars with text-to-speech, using C# and D3D, browser plug-ins
- Managed small team developing POS (Point-of-sale) interface in C#, Flash, ActionScript, connected to database-driven back-end.
- Researched and prototyped face and emotion recognition algorithms, e.g. Active Appearance Models
- Met with investors, customers and partners.

Software Developer at Alias (now Autodesk)   Toronto, Feb 2001 - Oct 2003

Within the Maya rendering team, I designed and implemented many critical parts (programmable shading, lighting, particle system) of a new real-time renderer that leveraged fixed- and programmable GPUs to produce high-quality images 100+ faster.

I became the main technical contact with HW vendors (AMD, NVIDIA), and the in-house OpenGL and hardware rendering expert. We were the first ISV to integrate (i.e. alpha-test) NVIDIA's Cg programmable-shading. I read hundreds of SIGGRAPH papers, adapted some to meet our customers' needs.

OpenGL driver engineer at ATI Research (now AMD)   Boston, Jan 2000 - Jan 2001

As a member of the driver team supporting the Rage128, Rage Fury MAXX and Radeon graphics cards, I developed a deep appreciation and understanding of the OpenGL API, of the driver and its interaction with games, applications and hardware.

- Analyzed, debugged, and corrected problems in the driver, and occasionally, pinpointed and worked-around hardware issues.
- Optimized driver for key applications (Maya, 3DSMAX, Quake, Unreal) and popular benchmarks. This was the first generation of ATI drivers that could reliably run demanding professional 3D applications like Maya without crashing right away.

Developed new features (OpenGL extensions), interacted with top customers (Dell, IBM, Fujitsu/Siemens) and convinced key ISVs to improve their code.

Software developer at Sanyo Electric (now Panasonic)   Japan, 1998 - 2000

Intern, on-site (11 months total) and remote (4 months), in an-almost entirely Japanese environment. R&D in the computer vision lab of Sanyo Electric near Osaka, Japan. I developed key features of the Panorama Boutique software for Windows, and single-handedly ported the whole application to MacOS. Amongst the first software to produce high-quality panorama from multiple images. 1M+ licenses sold through OEM deals with printers and digital camera manufacturers. Programmed in C++, optimized in x86.

École Polytechnique, B.Eng. Software Engineering   Montreal, 1996 - 1999

Wow, you made it this far? Great! I congratulate you for your assiduity and thank you for your interest!