

## J. Luc Paquin – Curriculum Vitae - 2022

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**Languages Spoken and Written:** French, English and Spanish.

**Citizenship:** Canadian

### Education

PERIOD	SCHOOL	DIPLOMA
1983-Now	Various – Continuing Education	Numerous Certifications
1979-1983	McGill University	D.D.S. (Doctor of Dental Surgery)
1976-1979	McGill University	B.Sc. (Biology, Electronic)
1974-1976	Collège Marie-Victorin	D.E.C. (Health Sciences)
1972-1974	Polyvalente Antoine De St-Exupéry	Secondary IV-V
1968-1972	Collège Roussin	Secondary I-III
1962-1968	Primary Pie XII	Primary

### Technology Experience

#### Experience Summary

- 58 years - cooking, food and drink
- 54 years - photography and darkroom
- 48 years - computer programming
- 40 years - system analysis, software design and analysis
- 37 years - computer-aided graphics, and animation
- 37 years - computers systems repairs
- 35 years - database management
- 35 years - microcontroller programming and robotics
- 35 years - technology project management
- 35 years - computer network design and integration
- 32 years - 3D real-time animation
- 32 years - computer hardware integration
- 32 years - electronic hardware design
- 32 years - POS and ticketing software design and integration
- 32 years - teaching computer including robotics related courses
- 32 years - real time decision support software design and integration
- 31 years - kiosk hardware and software design and integration
- 27 years - web design and programming
- 26 years - mobile programming

#### Type of Work Performed

- IT Projects Management
- Systems Analysis
- IT and Technology R & D
- IT Consulting
- Microcontroller programming (PIC, Atmel, TI, Galil, Cortex, Arduino, Raspberry Pi, Espressif, etc...)
- IoT
- Machine Learning
- Robotic and I/O hardware integration and development
- Unmanned Vehicles (Terrestrial, Marine and UAVs)
- Photography, graphics, animation, multimedia content creation, and video editing

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- Electronic hardware design and integration
- Motion control systems integration and development
- Barcode, magnetic card, Smartcard, RFID systems development
- Biometric systems integration and development
- Startup CTO
- Software design and analysis
- Software development, documentation, debugging, and installations
- Windows API programming - 16, 32 and 64 bit
- ActiveX controls and DLL development
- Desktop Apps (Windows, OSX, Linux, Multi-OS, Multi-Tier, Etc...)
- Mobile Apps (Android, iOS, Windows CE, Windows Mobile, PalmOS, Blackberry, Symbian, Etc...)
- Web Apps (LAMP(Linux-Apache-PHP-MySQL), Scripting, Java, ASP, ASP.NET, Web 2, CMS, Wakanda, Etc...)
- GUI and touch screen interface design
- Point Of Profit, Point Of Sales, and ticketing system analysis, design, and development
- Decision Support System analysis, design, and development
- Kiosk design and integration
- Multimedia Point Of Information, Point Of Profit, Point Of Sales, and ticketing kiosks
- Point Of Sales hardware integration
- Custom hardware interfaces
- Client fidelity programs development
- Interactive installation and exhibits
- Hardware design and integration with software
- Multimedia courseware creation
- Technical writing and product reviews

## **Instructor**

- PIC Microcontrollers
- Arduino
- Raspberry Pi
- Espressif
- Robotics
- DOS, Windows, OSX, Linux, iOS, Android, Multi-OS
- Linux-Apache-PHP-MySQL
- Food and Drink

## **Some of the IT Projects Luc Developed Over the Years**

### **Distributed Intelligent Security, Monitoring and Alarm Platform**

Wireless self-contained distributed intelligent security, monitoring and alarm platform for custom homes and commercial use. The platform includes specially designed intelligent sensors that can monitor different things like temperature, humidity, movements, status of doors and windows, video monitoring, its own internal status and diagnostic information and various other parameters. Those intelligent sensors communicate wirelessly to a central control panel that features a touchscreen and special control software that display the plans of the house in 3D with sensor locations. For commercial alarm companies a remote application can monitor multiple installations. I am responsible for design of the solution, building the proof-of-concept and building and supporting the final platform.

### **Web-Based Vertical Market Affiliate Marketing Platform**

Web-based platform for a vertical marketing company used to sell directly to the public, recruit affiliates, process sales transaction for affiliates and the general public and use a custom

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backend to manage data for the marketing company and the affiliates. I am responsible for design of the solution, building the proof-of-concept and building and supporting the final platform.

### **Local Business Directory Platform (Web and Mobile)**

Web and mobile-based platform to promote local small businesses. I am responsible for design of the solution, building the proof-of-concept and building and supporting the final platform.

### **Microcontroller-Controlled Sport Equipment Scale**

Specialized microcontroller-controlled scale used to balance specific sport equipment based on dynamic findings from my sport telemetry solutions. I am responsible for design of the solution, and of building proof-of-concept and production prototypes.

### **Distributed Networked Multimedia System**

Wireless hardware and software solution with embedded microcontroller, multimedia encoder/decoder and network transceivers to reliably distribute media content over a wireless distributed network. I am responsible for the design of the hardware and the software as well as for the building of proof-of-concept prototypes and production prototypes.

### **Online Social Media Challenge System**

Complete integrated front-end and backend solution to manage online challenges and contests. Includes social media integration, automated content (audio, images, presentations, video) management, conversion, transcoding and topping and tailing, publicity management and automated integration in the site and content, real-time reporting, user registration and notification and much more.

### **Sport Telemetry System**

Wireless hardware and software solution with imbedded sensors (accelerometer, gyroscope, magnetometer, etc.) in sporting equipment that tracks the equipment's movements in real-time. I did the preliminary research, tested various types of sensors to find the solution yielding the best results, constructed proof-of-concept prototypes, and planned production prototypes.

### **Deep Meditation Facilitating System**

Hardware and software solution that uses various biosensors (EEG, EKG, pulse, skin resistance, skin temperature, dissolved blood oxygen, etc.) to facilitate deep meditation in patients that suffer from chronic pain. We did the preliminary research, tested various types of sensors to find the solution yielding the best results, constructed proof-of-concept prototypes, and planned production prototypes.

### **Custom Mobile, Web, Kiosk, and Desktop Solution for Grocery and Retail Shopping**

Shopping list and shopping management solution that include custom hardware, mobile applications, as well as web, kiosk, and desktop components. The solution utilizes the mobile component in innovative ways including OCR, ICR, barcode, RFID and a push component.

### **Custom Integrated Web Shopping and Ticketing System, Retail POS and Ticketing, Kiosk System**

Complete business management solution with Web-based management and sales interface integrated with a back-office solution that offers retail POS and Box-Office Ticketing, Kiosk sales, coupons and voucher management, client fidelity and membership's solutions, and much more.

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### **Online and Mobile Social Media Challenge System**

Complete integrated front-end and backend solution to manage online challenges and contests. Includes social media integration, mobile integration, automated content (audio, images, presentations, video) management, conversion, transcoding and topping and tailing, publicity management and automated integration in the site and content, real-time reporting, user registration and notification and much more.

### **Security and Access Control System**

Networked access control system for a gated community that integrates gate control using RFID smartcards, visitor tracking, guard shifts and rounds control, video and environmental monitoring, biometric recognition, wireless alerts, event logging, and much more.

### **Guard Rounds Management System**

Networked guard rounds management system with integrated video and environmental monitoring, biometric recognition, wireless alerts, event logging, and much more.

### **Switch Testing System**

Touch screen-enabled interface and control software for automated airplane thermal switch testing. Integrates control and data logging of thermal dry well, salt calibration thermal bath, oil calibration thermal wet bath, data acquisition of switch test results, output of graphic reports, data output to Oracle, and integration with enterprise-wide ERP.

### **Airplane Washing System**

Touch screen-enabled interface and control software for an automated airplane washing system.

### **Warehouse Management System**

Multi-site and multi-warehouse management and real time inventory control system with mobile wireless inventory control capabilities and automated order reception and shipping.

### **Wireless Admission Control System**

Integrated wireless admission control system for various venues like theatres, museums, sporting events, etc. The system supports tickets with barcodes, magnetic strips, and RFID tags.

### **CinéLink**

HDTV and cinema digital recording software. Professional solution designed by integrating off-the-shelf computer hardware, industrial high definition cameras with a CameraLink or Gigabit Ethernet interface, with Windows-based software that can record in 8bit and 10bit without compression.

### **Kameleon / JLPSOFT**

Multilingual business management and security solutions that include POS, ticketing, decision support, information (POI)/Point Of Profit (POP)/POS/ticketing kiosks, as well as smartcard and RFID based loyalty schemes. Markets are hospitality (hotels, spas, resorts, fast food, restaurants, bars, etc.), entertainment (cinemas, theatres, sporting events, museums, trade shows, etc.), transportation ticketing, retail, banking, security, and a large variety of other markets.

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### **Medical Portal Database System**

As part of a major web based medical portal, designed the database backend of the Doctor's information database. Also created applications to automate the searching and extraction of relevant information from various web sources using Internet Explorer automation.

### **Ciné-Wizard**

POS system for movie theatres that include full management capabilities, sales kiosks, and smartcard-based loyalty schemes. Was the precursor of JLPSoft.

### **KAOS**

Kiosk Advanced Operation System. An operating system for multimedia information kiosks that manages access, security, remote diagnostics and maintenance, user statistics gathering, hardware, content presentation and much more. Customization and operation of the system is done via smartcards.

### **ESPRIT**

Electronic Sales & Public Relations Information Terminal. Self contained information kiosk, management system, and market analysis tools. Both hardware and software were designed in-house. Targeted at the wine, fine food, luxury goods retail trade and other retail type customers.

### **NORMITA**

Newly Obtained Research Multimedia Information with Touchscreen Access. Self contained information kiosk, management system, and market analysis tools. Both hardware and software were designed in-house. Targeted at the wine, fine food, luxury goods retail trade and other retail type customers.

### **Wine-Wizard**

Professional wine cellar management system, including windows CE applications for taking professional wine tasting notes and remote wine cellar management.

### **HUGO**

Highly Usable Graphical Object. Self contained information kiosk, management system, and market analysis tools. Both hardware and software were designed in-house.

### **POS-WIZARD**

Point of sale system for small retail establishments.

### **Decision Support System for the Pharmaceutical Industry**

Decision support system and data analysis tool for the pharmaceutical Industry.

### **MaxTan 1 - 5**

MaxTan version 1 to 5 is a modular POS system for the indoor tanning industry.

### **Decision Support System**

Decision support system for the profitability analysis of a direct sales mortgage trading desk.

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### **Decision Support System**

Decision support system and graphical code generator linked to ServiceModel.

### **Custom Business Simulation Engine**

Custom simulation engine for the work flow analysis of business processes.

### **Mortgage Pre-Qualification System**

Mortgage pre-qualification system. Handled the complete development of the database structures, database conversion, database maintenance modules, reporting utilities and various other utilities.

## **Personal Interests**

Cooking, wine, winemaking, writing science-fiction and fantasy novels, competitive shooting, cycling, skating, swimming, gunsmithing, badminton, metal and woodworking, electronics, sculpture, painting, reading, guitar building, music and photography.

1967-1976 - Archery (Olympic)

1973-2003 - Archery instructor

1983-2003 - Gunsmith

1983-2003 - Gun instructor (NRA, IPSC, USPSA, etc...)