
EXECUTIVE PROFILE

TECHNICAL & OPERATION SENIOR MANAGEMENT

Skilled in AI & New Technology Development with a keen eye for enhancing team efficiency and effectiveness through the development of innovative intelligence systems.

AREAS OF EXPERTISE:

- Artificial Intelligence Strategy Development
- AI: Vision, Time series, NLP, Trustworthiness
- Product Research & Development Strategic
- Resource Management & Team development
- Manufacturing Development, Industry 4.0
- Hydrogen & Micro-electronics, Aeronautics
- Technology Management
- Six Sigma, Lean Manufacturing
- Project Life-cycle Governance
- Innovation Strategy
- Project Management
- Operations Planning & Management

Career Experiences

LeeddarTech (Canada, Israel)

SENIOR DIRECTOR OF ENGINEERING (2021 to Jun-2023)

In this role, I architected a robust team structure, meticulously defined technical programs, and streamlined processes to foster efficiency. I spearheaded a diverse, multi-functional team of approximately 100 industry experts, each specialized in unique domains. These fields ranged from Hardware, encompassing ASIC, FPGA, and Sensing components like Lasers, MEMS, and APDs, to Software development, including Custom SoC-based Software platforms, Firmware, and APIs. My leadership also extended to V&V Testing, Data Collection, Data Engineering, and DEVOPS, effectively utilizing each discipline to achieve our organizational objectives.

Key accomplishments:

- Engineered a world-class engineering team dedicated to crafting Lidar component solutions, subsequently transitioning to the development of lean data fusion AI models for perception in autonomous vehicles.
- Piloted cross-organizational product development processes to align with the industry standard ISO26262, ensuring exceptional product quality and safety.
- Revitalized the company culture to cultivate a more collaborative, positive, and results-driven work environment, significantly boosting productivity and morale.
- Mentored the leadership and management team, with a central focus on stimulating team engagement, which resulted in a noteworthy performance improvement, from 65% to 76%.
- Distinguished achievement: Made a substantial impact on team morale and performance outcomes within the first three months in the position, setting a precedent for rapid progress and tangible results

My experience demonstrates my ability to develop and lead high-tech performing teams, establish industry-compliant processes, and cultivate a positive work culture.

Element AI (Canada, Quebec)

DIRECTOR, APPLIED RESEARCH LAB IN ARTIFICIAL INTELLIGENCE (2018 to 2021)

In this role, I played a pivotal role as part of the executive team. My responsibilities included devising and implementing strategic plans for Element AI's applied research, formulating AI strategies for various industries, and determining the necessary AI capabilities to develop cutting-edge solutions for clients. I also focused on improving operational efficiency and effectiveness by developing processes and systems for the team, while providing exceptional support to the business development and sales teams in managing critical accounts.

Key achievements include:

- Formulating and implementing strategic and operational plans for the Applied Research Lab (AI and Robotics), identifying strategic applications and creating AI roadmaps for our clients.
- Establishing procedures and implementing system improvements to enhance efficiency and results across teams and leadership, involving various departments and divisions within the organization.
- Leading the initial development of a state-of-the-art solution for visual anomalies detection in the manufacturing Industry 4.0 using generative models.
- Leading and mentoring a team of engineers, machine learning practitioners, and data scientists focused on developing, scaling, and commercializing client solutions in various AI fields such as time series analysis, computer vision, human-AI interaction, trustworthiness, and natural language processing.
- Producing a white paper on "The Future of Robot Learning" in collaboration with renowned machine learning and robotics experts such as Nick Roy, Ingmar Posner, Tim Barfoot, Philippe Beaudoin, Yoshua Bengio, Jeannette Bohg, and Oliver Brock.

During my tenure, I contributed to the advancement of Element AI's applied research capabilities, driving innovation and developing solutions aligned with client needs.

Intelligent Energy (France)

MANAGING DIRECTOR AND R&D MANAGER, (2015 to 2017)

In this role, I planned and directed entire administrative, human resources, HSEC performance, and financial operations to enable success of France branch. Represented Intelligent Energy externally with potential future clients, suppliers, and governmental research representatives. Designed and defined projects deliverables to ensure effective commercialization of technology. Formulated and implemented annual operational KPI for yield and performance to improve cost.

Key achievements include:

- Increased reliability of our micro planar H2 fuel cell technology from 15%-64% in six months.
- Planned fuel cell production, organized and improve prototyping lab in the industry 4.0 mindset.
- Patent Fluid manifold attached by interface to fuel storage for fuel cell system

BIC, (France and Canada, BC)

DIRECTOR R&D & MANUFACTURING, DEVELOPMENT FOR H2 FUEL CELL DIVISION (2012 to 2015)

In this role, I oversaw ongoing development of a micro planar H2 fuel cell technology to improve quality, cost and timeline with an international team of 14 and project team of 40 people, including PhDs, engineers, and technicians across multiple sites and specialties. Created production pilot line and identified equipment requirements for high volume solution, while spearheading continuous product optimization for cost, durability, quality, performance, safety, and other factors. Established and implemented continuous process improvement initiatives.

Key achievements include:

- Led the operations of the multi-site production line (semi-automated stage).
- Defined budget and investments/CAPEX strategy for fuel cell manufacturing division.
- Increased technology performance using Lean manufacturing, Six Sigma and Industry 4.0 tools.
- Achieved honorific award in 2014 for delivering exceptional leadership.

Angstrom Power (Canada, British-Colombia)

HEAD OF ENGINEERING FUEL CELL & H2 STORAGE DEVELOPMENT, part of executive team (2008 to 2012)

In this role, I managed all efforts to build a technical team from scratch. Led various product development efforts for manufacturing of micro H2 fuel cell, H2 generation system, and H2 storage technology. Enabled successful development of engineering specifications and component level testing methods. Conducted various ongoing data and statistical analysis to improve the product performance.

Key achievements include:

- Organized and planned fuel cell production. (incl. planning, cleaning, material organization,...)
- Spearheaded strategic projects and improved OEE by a factor of 6x, reduced BOM cost by 50%, increased power of Hydrogen fuel cell by 3X, and optimized reliability by 3X.
- Steered two fuel cell technology and lab transfers to our manufacturing partners in Japan and Taiwan.

IBM Canada, (Canada, Quebec)

R&D MANUFACTURING PROCESS ENGINEER – MICROELECTRONICS (2003-2008)

In this role, I designed and implemented key processes for high volume production; managed the project, evaluated and selected strategic uses of material, overseeing cost, quality, resources, schedules and scope. Identified and supported equipment & manufacturing line, hands-on. Collaborated with international teams US, Europe and Asia. Official team coach for Six Sigma and Lean manufacturing, DOE, DFMEA, SPC, 8D, R&R, T-test and more.

Key achievements include:

- Patented new concept for a 50mm Dual Flip Chip Plastic Land Grid Array
- Won IEEE best publication of the Electronic Components and Technology Conference, 2008
- Developed the fully automated manufacturing solution for the thermal solution of PlayStation III

ECOLE POLYTECHNIQUE DE MONTRÉAL (Canada, Quebec)

INSTRUCTOR, DRAFTING & MODELING – 2D & 3D (2002-2008)

Led instruction in drafting, modeling & design, dimensioning standard and plan reading; Conducted DAO demonstrations with AUTOCAD & CATIA and recognized for creating high-impact teaching material, later used to create drafting handbook for course.

Additional experiences in Method Agent for CRJ-700 & CRJ900 at Bombardier aéronautique (1996-2002)

Educations & Credentials

École Polytechnique de Montréal | **BACHELOR IN PHYSICS ENGINEERING, MICROELECTRONICS & MICRO FABRICATION SPECIALTY, 2003**, Won Honorific Bachelor

École nationale d'aéronautique | **MECHANICAL AEROSPACE TECHNICIAN, 1998**

Participated in various training programs to enhance leadership and communication skills.

Patents

FLUID MANIFOLD ATTACHED BY INTERFACE TO FUEL STORAGE FOR FUEL CELL SYSTEM, Patent date Issued Feb 11, 2016 - 20160043416

Fluid manifold and method therefor, Patent date Issued Dec 15, 2015 - 9214687

SYSTEM AND METHOD OF ACHIEVING MECHANICAL AND THERMAL STABILITY IN A MULTI-CHIP PACKAGE, Patent date Issued Jul 12, 2012 - 20120175766

System and Method of Achieving Mechanical and Thermal Stability in a Multi-Chip Package, Patent date Issued Aug 22, 2010 - 20100181665

Publications

From Machine Learning to Robotics: Challenges and Opportunities for Embodied Intelligence

Publication date Oct 28, 2021

Publisher: arXiv: Robotics - 2110.15245

<https://deepai.org/publication/from-machine-learning-to-robotics-challenges-and-opportunities-for-embodied-intelligence>

Development of a 50mm dual Flip Chip Plastic Land Grid Array package for server applications

DOI: 10.1109/ECTC.2008.4550241

Publisher: IEEE, Awarded the Best Paper at the 2008 IEEE event

<https://ieeexplore.ieee.org/document/4550241>

Honors & Affiliations:

Founder and Team Lead of Project ESTEBAN I, responsible for developing the first Solar Car for École Polytechnique de Montréal. This project was recognized internationally, winning the prestigious National Geographic Worldwide Solar Car Design Prize at the American Solar Car Challenge in 2001.

Ranked in the top 200 of 3,800 candidates in the 2016 Canadian Astronaut Selection Program, successfully passing both analytical and judgement tests.

Additional information

- Blog on leadership : <https://laclecestletemps.com/>
- Book: **Le manager est un voyageur du temps** , <https://www.editionsleduc.com/produit/2881/9782379352867/le-manager-est-un-voyageur-du-temps>
- Blog post at HEC Montreal: <https://www.revuegestion.ca/comment-etre-un-gestionnaire-transparent>
- Guide for start-ups: presented at C2Mtl <https://laclecestletemps.com/traversez-la-vallee-de-la-mort-avec-votre-startup/>