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## Work Experience

### Willows AI

2021-Present

Owner, Montreal, QC

Willows AI was a research and consulting company I started

- Led a team to propose, sell and deliver AI software projects related to computer vision in manufacturing, including classification, object detection and generative models
- Led a research program to build foundation models for visual defect detection, including writing a paper (with Ahmad Mezher, Submitted to *Expert Systems With Applications*, revised Oct 2023) and building a proof of concept detection system
- Built and deployed a prototype on-premise large language model retrieval (using llama.cpp, transformers, python and shell) system to help manufacturers consult vendor quality documents more quickly

### Element AI (Acquired by ServiceNow in 2020)

2018-2021

Applied Research Scientist, Element AI, Montreal, QC

Element AI was a technology start-up commercializing machine learning research. I led “Research as a service” projects in the advisory group, including banking and manufacturing

- Oversaw the application of modern machine learning methods to client problems
- Led a team of software developers, business strategists, research scientists and machine learning engineers
- Managed the lifecycle (sales, scoping, delivery) of “Research as a Service” (RaaS) projects in advanced manufacturing (computer vision)
- Acted as a trusted advisor to clients: synthesized client situations into technical scopes of work, including evaluating research from recent literature. Translated findings into actionable insights and recommendations for clients
- Responsible for proposals, technical reports and client presentations
- Maintained relationships with clients, focusing on Fortune 500 businesses

### KPMG

Manager, Advisory Services June 2014 – Oct 2018

- Focusing on operations transformation for public sector clients
- Wrote proposals in response to RFPs from government

- Scoped and planned consulting projects that included data collection, client interviews, workshops, desktop analysis and synthesis, recommendations and implementation planning
- Participated in all of the above stages across different projects
- Led data collection and analysis workstreams, including work planning and coordination of a team of consultants
- Presented findings to senior stakeholders (C-level equivalent)
- Participated in the growth of the Ottawa office, including responsible for hiring consultants / senior consultants

## **Carleton University**

Assistant Professor July 2008 – June 2014

- Developed and taught senior undergraduate courses in image processing and medical imaging
- Led an ongoing research program studying applications of magnetic resonance imaging to non-destructive testing, including supervising graduate and undergraduate projects in this area
- Authored or co-authored ~20 articles in peer reviewed journals, mainly in experimental magnetic resonance physics (counting articles published both from my Ph.D. research and this position)
- Served as the Biomedical and Electrical Engineering program coordinator, responsible for curriculum development and maintaining accreditation of the program

## **Education**

MBA, Queen's University 2014

Ph.D. Electrical Engineering, University of New Brunswick 2007

B.Sc. Electrical Engineering, University of New Brunswick 2003

## **Other**

Technologies: python, pytorch / pytorch lightning, linux, coreutils, bash, git, docker (basics), AWS (EC2/S3/basic administration), various cloud ML tools, MS Office

Personal: Avid runner, I speak some French and beginner Japanese