

SPECIALIZED PROFESSIONAL COMPETENCIES

- Forensic data analytics, data mining, and custom software development
- Data tools and data visualization of sensor and data logs
- Forensic investigation of fire and mechanical failures for insurance and legal clients
- Root cause analysis, technical report writing, protocol development, and experiment design
- Forensic x-ray imaging, solar commissioning, codes and standards compliance assessment
- Product design, testing, and development

ACADEMIC BACKGROUND

- 2016 [Ryerson University](#)
Data Analytics, Big Data, and Predictive Analytics Certificate
- 2011 [University of Waterloo](#)
Mechanical Engineering Bachelor of Applied Science (B.A.Sc.)
Technical Electives Include: Finite Element Method, Combustion, Fatigue and Fracture Analysis, Metallurgy in Manufacturing, Composites, Computational Fluid Dynamics

SOFTWARE

- [Data Science and Analytics](#)
- R, SQL/SQLite, PostgreSQL, mongodb, Amazon Web Services (AWS), hadoop, hive/pig, elasticsearch, Excel
- [Data Visualization](#)
- R (knitr/markdown, ggplot2, ggvis, shiny), Tableau, d3.js
- [Software Development/ Programming](#)
- VB.NET, R, javascript, java
- [Enterprise and Business](#)
- NetSuite Web Service API, Microsoft Office Suite
- [Other Tools](#)
- bash, LaTeX, git, vim, web design (html/css), regex, xpath
- [Operating Systems](#)
- Linux (10 yrs experience including Debian, Ubuntu, Arch, AWS Linux AMI), and Microsoft Windows

WORK EXPERIENCE

- Sept 2017 – Mar 2017 [Technical Consultant \(Mechanical/Electrical\)](#)
[Envista Forensics Canada Ltd.](#)
- Equipment loss consulting including investigation of cause and extent of damages as well as cost assessments
 - Forensic engineering investigations including fire, mechanical failure
- Mar 2017 – Mar 2012 [Forensic Investigator and Systems Developer](#)
[-30- Forensic Engineering](#)
- Forensic investigations including fire, mechanical failure, and data analysis for insurance and legal clients
 - Data analytics and custom software development including search tools, automated custom report generation, API integrations, custom dashboards, and visualizations which are used throughout the firm
 - Development of domain specific tools for engineers including data mining, analysis, and presentation in relation to large property and casualty losses
 - Site investigations, analysis of evidence, code compliance assessment, technical report writing, and test protocol development
- Mar 2012 – Sept 2011 [Management Associate, US Steel Canada](#)
- Supervision, scheduling, and planning of contractor and union mechanical maintenance work in safety-oriented industrial environment
 - Initiated projects to improve access and retrieval of key planning information
 - Development job procedures based on industry standards

AFFILIATIONS

- [Professional Engineers Ontario](#)
- Licensed Member

Dec 2010
Sept 2010

Mechanical Engineering Co-op, Christie Digital Systems Inc.

- R&D design and thermal/optical testing of next-generation digital cinema projectors
- Investigated root causes for optical artifacts and developed possible solutions
- Communicated with suppliers to source mechanical components for investigations
- Presented to management on DMD cooling block thermal interface material investigation

Apr 2010
Jan 2010

Design Co-op, Spectrum Manufacturing Inc.

- Development of LED entertainment lighting fixtures from concept to working prototype
- Measured and iterated design based on thermal response of prototypes and detailed results in technical reports
- Responsible for heat sink and chassis design and drafting, material choice, water ingress protection (IP67), vacuum mould design, sourcing and purchasing components, machining, assembling, and testing the completed prototype

Aug 2009
May 2009

Mechanical Engineering Co-op, Siemens Canada

- Project management team member coordinating with engineering, manufacturing, and supply chain management during development of new gas turbine for power generation
- Conceived, developed, and implemented engineering document control system for revision tracking and search
- Failure mode and effects analysis (FMEA) development, quality control documentation, and work breakdown structure development

Dec 2008
Sept 2008

Mechanical Engineering Teaching Assistant, University of Waterloo

- Assisted professors in Mechanical Engineering concept course involving computer drafting, technical writing, oral communications, and engineering professionalism

Apr 2008
May 2007

Test Lab Technician, Multimatic Inc.

- Quality assurance (QA) and product development testing in automotive test lab environment, with methods and equipment including strength testing, tensile, corrosion, operating efforts, fatigue, and failure mode analysis