

# LAURA HOLTE CHUTNY

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## SUMMARY OF QUALIFICATIONS

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Data Scientist and Process Engineer with 20+ years of experience helping businesses solve difficult technical challenges with real world data.

- Experience in research, oil & gas, chemicals and polymer industries
- Leadership experience including start up and operation of a thriving consulting business
- Currently pursuing a Master of Information and Data Science (MIDS)
- Current experience in Python, R, SQL, Machine Learning and Statistical analysis in Data Science
- Strengths in analysis, modeling and simulation, problem scoping and planning. Excels at identifying patterns and similarities amongst fields, departments and industries and effectively communicates needs, expectations, recommendations and results.

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## EDUCATION

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- 2020: Expected: Master of Information and Data Science, University of California Berkeley
- 2008: Lean Six Sigma Black Belt, Air Academy Associates, Calgary, Alberta
- 2001: Model Predictive Control, University of Calgary
- 2001: Managing Service Quality & Customer Satisfaction Program, University of Calgary
- 1997: Master of Engineering in Chemical Engineering, University of Delaware, Newark, Delaware, USA
- 1990: Bachelor of Science in Chemical Engineering, 1990 University of Alberta, Edmonton, Alberta

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## PROFESSIONAL EXPERIENCE

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**CLEARLY PROCESS INC.** 2008 - Present

Data Scientist and Senior Process Engineer Calgary, AB

- Developed facial keypoint recognition machine learning model using multi-layer neural networks, and kNN models for MIDS program.
- Developed webapp to rapidly test and prove code for data pipeline using Flask, Spark, and Hadoop in a containerized (Docker) environment for MIDS program.
- Led front end process design for 100 MMSCFD gas processing plant, including simulations, material balances, PFDs, P&IDs and regulatory submission.
- Assisted client with process options to improve C3 recovery for 100 MMSCFD gas plant. Included analyses of large data sets to match real world data, determining KPIs and modeling to determine most attractive options.
- Start-up of small business including, incorporation, contracts, and ongoing financial management.

**PROCESS ECOLOGY INC.** 2011 - 2018

Managing Partner (Operations) & Senior Process Engineer Calgary, AB

- Led Agile development, as Product Manager, for a new web-based application used in reporting venting, flaring and methane emissions in the upstream oil and gas sector.
- Led process design for multiple liquids recovery projects for the natural gas processing industry, including benchmarking operations, rating, conceptual design, modeling and front-end design.

- Analysis of large client datasets to estimate air emissions for Western Canada O&G producers, reporting Greenhouse Gases, Methane, and VOC's, including identification of emissions reductions opportunities.
- Managed Operations as partner, including human resources, IT management, policy development and financial reporting.

**NOVA CHEMICALS CORPORATION**

2007 - 2008

Research Scientist

Calgary, AB

- Developed, with our team, the conceptual process design for a new polymer production process.
- Prepared budget level cost estimate for the new process, value \$USD 250 MM, and developed schedule and resource plans for the detailed research and development phase.
- Conducted pilot plant trials to determine operational feasibility of producing a novel type of polymer and determined if resulting product would be cost effective to manufacture.

**ASPEN TECHNOLOGY INC. (Hyprotech)**

2000 - 2006

Senior Staff Technical Support Engineer

Calgary, AB

- Provided ongoing complex technical support on a range of engineering software products, including coordinating input from development, sales and administration to ensure timely, quality solutions for customers.
- Identified underlying design issues and patterns in customer inquiries and analyzed them to provide effective, thorough solutions for the customer, meanwhile improving and adding value to the software.
- Coordinated knowledge sharing throughout the organization, through implementation of company wide data repository

**FLUOR DANIEL CANADA INC.**

1997 - 2000

Intermediate Process Engineer

Calgary, AB &amp; Kingston ON

**KILBORN INC. (SNC-LAVALIN)**

1996 - 1997

Process Engineer

Kingston, ON

**SHELL CANADA LTD.**

1990 - 1992

Process Engineer

Edmonton and Calgary, AB

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**PROFESSIONAL AFFILIATIONS**


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- Professional Engineer in Alberta (APEGA) and BC (EGBC)
- Senior Member of the American Institute of Chemical Engineers (AIChE)

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**SELECT PUBLICATIONS AND PRESENTATIONS**


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- *"Dynamic Instabilities of Two Parallel Integral Superheaters to Vaporize NGL Feed to Olefins Cracking Furnaces"*, L. Chutny, K. Botros, M. de Boer and P. Talbot. AIChE Ethylene Producers Conference Proceedings, AIChE Spring Meeting – 20th Ethylene Producers Conference 2008, New Orleans, LA. AIChE, **2008**.
- *"Use of Vrentas-Duda Free Volume Theory to Predict Comonomer Diffusion in Polyethylene"*, L. Chutny and E. Cheluget. AIChE National Meeting Conference Proceedings, AIChE National Meeting 2007, Salt Lake City, UT. AIChE, **2007**.
- *"Air Emissions Regulations in Western Canada – A Primer"*, jwnenergy.com, **2017**.  
<http://www.jwnenergy.com/article/2017/1/air-emissions-regulations-western-canada-primer/>