Lucas Santos Queiroz

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EDUCATION

- M.Eng. in Chemical Engineering – **University of Calgary**, CA *Aug 2019 – In Progress*
  GPA – 4.0/4.0

- B.Sc. in Chemical Engineering – **Rio de Janeiro State University**, BR *Mar 2011 - Dec 2017*
  GPA – 8.67/10

- B. Sc. in Chemical Engineering - **Purdue University**, US *Aug 2015 - May 2016*
  GPA – 3.8/4
  Exchange Program - Full scholarship provided by the Brazilian government

TECHNICAL SKILLS

- Programming: Python, Minitab, MATLAB, Simulink, ASPEN plus, HYSYS, SCILAB, EMSO, Excel VBA.
- Certificates: Neural Networks and Deep Learning; Structuring Machine Learning Projects; Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization.

ACADEMIC PROJECTS

MODELLING THE INFLUENCE OF WEATHER CONDITIONS ON TRAFFIC ACCIDENTS IN CALGARY USING MACHINE LEARNING ALGORITHMS *Dec 2019*

Proactive planning for severe weather conditions is imperative to help reduce casualties and property damage resulting from traffic accidents.

- Preprocessed data analysis – Data cleaning and statistical analysis.
- Supervised learning algorithms performed – KNN, Linear Regression and Random Forest.
- Unsupervised learning algorithms performed – K-Means, Mean Shift and DBSCAN.

SENIOR DESIGN: DEVELOPMENT OF AN INTEGRATED PLANT OF ETHYLENE OXIDE AND ETHANOLAMINE *Dec 2017*

- Simulated and optimized the plant process in ASPEN plus.
- Built the Process Control Strategy, including designing all loops and performing the HAZOP
- Created the PFD, PI&D and Plant Layout manufacture.
- Designed all separation towers, reactors, pumps and compressors.
- Designed the optimal heat exchanger scheme using PINCH methodology.
- Analyzed the economic viability of the project.
- Engaged in a productive collaboration with teammates.

SIMULATION OF INDUSTRIAL MODULES OF MEMBRANES TO THE SEPARATION OF CO_2/CH_4 MIXTURES *Nov 2013 – Aug 2015*

- Created a mathematical model to describe CO_2/CH_4 separation using hollow fiber polymeric membranes.
- Developed a computational algorithm to simulate the process and to study the efficiency of separation.
- Achieved the optimal membrane module based on pre-salt scenario.

PROFESSIONAL EXPERIENCE

LUBRIZOL CORPORATION, Rio de Janeiro, BR
Sales Coordinator *Jun 2018 – Jun 2019*

- Participated in the new Logistic System project which is going to increase 5% of Lubrizol's profit;
- Participated in the start of a new US oil company operations in Brazil.
- Analyzed customer's logistics in order to give the best solution to reduce its production complexity and inventory;
- Strategically quoting Lubrizol products to customers following their needs and the market leads.

LUBRIZOL CORPORATION, Rio de Janeiro, BR
Sales Intern *Mar 2017 – Mar 2018*

- Responsible for the compilation of market data and the creation of monthly reports for strategic sales planning;
- The first contact of new clients in Brazil and parts of Latin America;
- Developed a system (Excel-VBA) to monitor the number of samples sent to customers in order to better identify client's needs and to easily track new business opportunities;
- Mapped the Brazilian lubricant market to analyze the competitors and recognize opportunities.

GREAT LAKES TOP BOAT CO., Knoxville, US
Implementation of lean in the inventory system *Jun 2016 – Jul 2016*

- As a leader of multidisciplinary group, I participated in the implementation of Lean Enterprise methodology in the inventory system at Great Lakes Top Boat Co.;
- Arranged interview with department chiefs related to the inventory system, such as Sales Chief, Procurement manager, Customer service manager – and also, I organized a survey to collect the employee's opinions about the process;
- Developed a Grant Chart to monitor the timing of the project and performed some tools such as Pareto Chart, 5 why, Fishbone diagram in order to find the root cause;
- After finding the cause, we proposed a digital KANBAN system which would reduce the dead time and the cost of the process.