

Simone Reynoso Donzelli

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SUMMARY OF QUALIFICATIONS

- Upcoming Chemical Engineering graduate with 12 months' work experience
- Strong knowledge in optimization with hands-on experience with optimization software and projects
- Advanced proficiency in Python with 7+ years of experience, specialized in Data Science, Machine Learning and Artificial Intelligence
- Ability to prepare deliverables in a fast-paced environment, from consulting background
- Strong attention to detail, work ethic and willingness to be part of a team

PROFESSIONAL BACKGROUND

•Machine Learning Engineer

January 2024 - Ongoing

Cooper Standard

Stratford, Canada

- Analyzed and queried large-scale production data using SQL Server Management Studio, delivering insights to enhance operational performance
- Developed regression models using PyTorch and XGBoost, resulting in a 2% reduction in waste and substantial cost savings
- Designed and implemented a rule-based controller using Gekko to optimize production processes, ensuring control of output variables within desired set-points

•Master's Researcher

January 2023 - Ongoing

University of Waterloo

Waterloo, Canada

- Focused on solving chemical process flowsheet design problems in both steady and dynamic states using advanced Machine Learning techniques
- Researched the application of masked hybrid and discrete Reinforcement Learning agents to design chemical process flowsheets in steady state, utilizing Aspen Plus as part of the simulation; results were published in the *AIChE Journal* ([Paper](#))
- Researched the application of Reinforcement Learning agents to simultaneously design and control chemical process flowsheets using surrogate models in the environment; paper is under peer review and results are expected to be published in the *Computers and Chemical Engineering Journal*

•Research assistant

January 2022 - August 2022

Universidad Iberoamericana

Mexico City, Mexico

- Developed a Python-based hybrid platform integrating ASPEN Plus for real-time optimization utilizing genetic algorithms to optimize a multi-objective design function of an Organic Rankine Cycle ([Project's code](#))

ACADEMIC BACKGROUND

•Master of Science (Chemical Engineering)

January 2023 - Ongoing

University of Waterloo

Cummulative GPA: 9.2/10

•Bachelor of Science (Chemical Engineering)

August 2018 - July 2022

Universidad Iberoamericana (IBERO)

Cummulative GPA: 9.6/10

Highest CGPA of the class

PERSONAL PROJECTS

Visit my [personal website](#) to explore my professional journey in data science and machine learning. You'll find an extensive portfolio featuring diverse projects like an image classifier, price predictor, and physics-informed neural networks. Discover the tools I use, including Python, Excel, and SQL, and see my expertise in action.

TECHNICAL SKILLS AND INTERESTS

Languages: Spanish (Native), Italian (Native), English (Level C2 with Cambridge Certification), German (Level C1 with Deutsches Sprachdiplom Certification), French (Level B2 with DELF Certification), Chinese (Level A2 with HSK Certification)

Advanced Programming Languages: Python, Microsoft Office Suite, SQL, PowerBi

Intermediate Programming Languages: MatLab, HTML, CSS, JS

Statistical programs: R-Studio, MiniTab

Chemical Engineering simulation programs: ASPEN Plus, DWSIM

EXTRACURRICULAR AND LEADERSHIP EXPERIENCE

•Teaching assistant

June 2023 - April 2024

University of Waterloo

Waterloo, Canada

- Provided a welcoming environment for students, answering questions and facilitating open discussions to enhance their learning experience
- Taught two courses: an introductory Python programming course and an advanced Aspen Plus course for final-year undergraduate students
- Organized and supervised examinations, offering extra review sessions to clarify doubts and ensure students were well-prepared

•Caritas Volunteer

August 2022

Caritas Roma

Rome, Italy

- Served more than 300 meals to individuals experiencing homelessness
- Organized supporting group talks during lunch to encourage fostering open communication and encouragement to strengthen community bonds and individual resilience

•Volunteer

August 2016 - May 2018

Gertrudis Bocanegra Institute

Mexico City, Mexico

- Led a group of 30 underprivileged individuals in community engagement activities, promoting teamwork, personal growth, and a supportive environment
- Organized and facilitated team-building events, encouraging collaboration and team spirit
- Taught basic conversational English and Mathematics

•Dean

June 2015 - August 2015

Dublin Oak Academy

Dublin, Ireland

- Co-led a summer camp alongside 12 deans, overseeing the care and well-being of over 120 children
- Organized sports and cultural activities, providing opportunities for the children to explore Dublin and build friendships with one another
- Counseled children experiencing homesickness or sadness, offering emotional support and ensuring their well-being throughout the camp