ALESSANDRA GUERINONI

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EDUCATION

BACHELOR OF ENGINEERING, MECHATRONICS ENGINEER
McMaster University · Sept 2016 - Apr 2022

- Golden Key Award for students in the top 15% of the faculty.
- Future Leader Recognition Award for exemplary work during the co-op term.
- Deans' Honour List, maintained a 3.7 GPA (4.0 scale).
- McMaster's Faculty of Engineering Entrance Award.

WORK EXPERIENCE

SOFTWARE ENGINEER
Tesla · July 2022 - Present

- Designed and implemented a notification system using Kafka, Kubernetes, and Golang, generating an estimated $18.8M in business impact.
- Engineered and optimized an ETL pipeline for efficient data consumption via gRPC and REST APIs, leveraging MySQL and Golang.
- Led DevOps initiatives, managing infrastructure, and CI/CD automation processes.
- Led technical presentations and authored comprehensive design documents, facilitating effective problem solving across the organization.

PROJECT MANAGER & GOVERNANCE ADMINISTRATOR
Bombardier, Mitsubishi Heavy Industries · May 2019 - Aug 2020

- Chaired monthly meetings with Managers and Senior Director, providing status updates on critical projects.
- Managed more than 50 projects, ensuring budget and schedule adherence.
- Created a Python program for Oracle database access.

LEAD COORDINATOR, UNIVERSITY COLLABORATION TEAM
Bombardier, Mitsubishi Heavy Industries · Sept 2019 - Aug 2020

- Spearheaded communications between Bombardier and partner universities, fostering strong academic-industry relationships.
- Managed a team of 6 professionals, overseeing university collaborations and successfully recruiting 26 interns.
- Negotiated university contracts, resulting in a 2% reduction in cost overhead and improved resource allocation.

TEACHING ASSISTANT - DISCRETE MATHEMATICS & COMPUTATIONAL THINKING
McMaster Faculty of Engineering · Jan 2019 - Apr 2019 & Sept 2021 - Dec 2021

- Facilitated learning of Haskell and computer science concepts for 50+ students, enhancing comprehension of course material.
- Conducted student consultations, graded assignments, and led classes, contributing to above-average class performance.

SOFTWARE ENGINEERING CAMP COUNSELOR
McMaster Faculty of Engineering · Apr 2018 - Sept 2018

- Introduced Software Engineering concepts to over 250 children through Python, Arduino, and web projects.
- Traveled across the city of Hamilton to present STEM lectures to more than 100 students.

ACHIEVEMENTS

KUBERNETES CONTRIBUTER
Kubernetes Community · Aug 2024 - Present

- Contributed to several Kubernetes repositories, making changes to the website and kubectl.

CUSTOM TESLA APP
Independent Developer · Aug 2024 - Present

- Created a Tesla mobile application that scrapes publicly exposed Tesla APIs, leveraging React-Native and Node.js.

EYE MOVEMENT DETECTION FOR ROBOTIC CONTROL
Independent Developer · Aug 2024 - Present

- Created an electrode-based eye movement detection system designed to control a 3-degree-of-freedom robot.

MACHINE LEARNING
Cornell University · May 2024 - Aug 2024

- Completed the Machine Learning certificate program at Cornell University.

TRIAUTO - EMBEDDED & SOFTWARE APPLICATION
McMaster University · Sept 2021 - Apr 2022

- Collaborated with a 4-person team to develop an automated hospital triage system using React, Node.js, MySQL, and Socket.IO.

CACAO HUSK TEA - TEA BUSINESS
Calientico Inc · Aug 2021 - Aug 2022

- Founded a Cacao Husk Tea business, selling tea sourced from Peru, with a 31% profit margin.

LIT GIRLS GUEST SPEAKER - LEADERSHIP TRAINING PROGRAM
Blue Jays Care · May 2021

- Inspired over 50 young women to explore engineering as a career path.

OUTFUEL - SOFTWARE APPLICATION
McMaster University · Jan 2018 - Apr 2018

- Led a team in the development of a fuel expense tool using Java and J-Unit testing.

SKILLS

TECHNICAL LANGUAGES: Go • Python • Java • C++ • Haskell • HTML • CSS • JS • Matlab • VBA • Verilog • SQL

SOFTWARE & LIBRARIES: Docker • Kubernetes • Kafka • Temporal • REST • gRPC • LTSpice • React

RELATED COURSES: Data Structures • Programming Principles • Operating Systems • Databases • Linear Optimization • Circuits

SPOKEN LANGUAGES: English (Native) • Spanish (Native) • French (Beginner)