# MANUEL LEMOS

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## EXPERIENCE

**MAY 2021 – AUGUST 2022**

### BUSINESS INTELLIGENCE DEVELOPER INTERN, CURTISS WRIGHT

- Designed, implemented, and maintained a suite of key performance indicators.
- Designed intuitive graphical user interfaces with intelligent back-ends to reduce manual data manipulation by **90%.**
- Liaised with DevOps team to integrate business intelligence assets into future development lifecycles.
- Designed customized data collection models for specific visualization tasks.
- Improved data gathering, analysis and visualization procedures with strategic optimizations.
- Proposed capital expenditure ventures and executed dynamic economic analysis driven by software.

**JULY 2015 – AUGUST 2020 (SEASONAL)**

### IT CONSULTANT, HOFFER MECHANICAL

- Developed complex solutions to all business problems by detailed analysis, negotiation, and coordination with stakeholders.
- Proctored training via in-person and online venues for software implementations.
- Offered software related technical support through various communication channels.
- Programmed an automated job costing application decreasing labor time by **70%.**
- Implemented a cloud based SDS **database**.
- Created an **Angular** application to replace an outdated website.
- CAD Modelling in Autodesk **Inventor** and **AutoCAD**

## EDUCATION

**SEPTEMBER 2018 – APRIL 2023**

### BSC MECHATRONICS ENGINEERING, MCMASTER UNIVERSITY

- **3.8 GPA** (10.8 on 12-point scale)
- President's Award Scholarship Recipient
- Provost Honour Roll

## PROJECTS

**SEPTEMBER 2022 – APRIL 2023**

### CYCLOPS RIDE ASSIST, CAPSTONE PROJECT AT MCMASTER UNIVERSITY

**Source Code**

- Conceptualized and delivered a bicycle mounted ride monitoring device.
- Developed a complex multithreaded python program to drive real time data collection, video recording, crash detection, and rear vehicle detection.
- Collaborated with stakeholders to select ambitions, but realistic milestones on pre-release project development.

**Technologies:** Git, Python, Multithreaded, Arduino, I2C, Serial, FFMPEG, OpenCV, Inventor.

## SKILLS

### PROGRAMMING

- Python
- SQL
- C, C++
- Control Systems
- Embedded Systems
- VBA
- PLC

### SOFTWARE

- Git
- VSCode
- AutoCAD
- Office 365, Google Suite
- Royal TSX, MobaXterm

### LAB

- Arduino
- Soldering
- Multimeters

### COURSEWORK

- Database Design and SQL Queries
- Embedded Systems Design
- Real Time Systems and Control Applications
- Scientific Computation
- Data Structures Algorithms
- Software Development

## PACEMAKER, ACADEMIC PROJECT AT MCMASTER UNIVERSITY (TEAM OF 5)

**Source Code**

- Implemented a responsive pacemaker system on a K64F MCU.
- Coordinated the development of a Simulink model capable of interfacing with a Vue/Electron application in real time through a serial port.
- Aided in the development of a Vue/Electron application capable of performing telemetry with an MCU in real time through a serial port.

**Technologies:** Simulink, K64F, Serial, Node.js, Vue.js, Electron, Mongoose, Express, GAE, MongoDB Atlas, Git