

# Edward Miranda

Cornelius, OR  
USA

# Process Engineering and Data Science

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## EDUCATION

### Willamette University

Master of Science in Data Science, *current GPA: 4.0*

Salem, OR

**08/2024 – 08/2025 (Expected)**

### Oregon State University

Bachelor of Science in Mechanical Engineering

Corvallis, OR

**09/2012 – 12/2017**

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## RELEVANT COURSEWORK (GRADUATE-LEVEL COURSES ARE BOLDED)

**Applied Machine Learning, Python for Data Science, R for Data Science, Capstone Project**, Statistics for Engineers

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## PROFESSIONAL EXPERIENCE

### Module Engineer at Intel Corporation

**09/2022 – Present**

- Coordinated a cost avoidance of approximately \$450,000 by creating an inventory-consumption contingency plan in response to a critical part's cost increase (plan implementation pending).
- Improved indicator data analysis efficiency by 83% via use of Excel VBA to extract, import, and visualize equipment performance metrics (reduction from approx. 3 hours to approx. 30 minutes).
- Optimized key spare parts inventory size by using SQL to query historical parts usage data and using engineering judgement to make calculations.
- Engineered data for systems optimization and quantifying equipment failure root causes by implementing a Root Cause Identification Code system to highlight root causes and then query them using SQL.
- Support factory operations via on-call engineering support which involves multi-party coordination, technical equipment knowledge, and advanced multitasking abilities.

### Senior Manufacturing Engineer at Edwards Vacuum

**03/2022 – 09/2022**

- Increase production capacity in work cells by reducing constraints, example: acquire additional dedicated workspace.
- Adjust line-side stock quantities by analyzing usage trends of specific components to guide the decision to increase or decrease them.
- Create and maintain Process Documentation by implementing Standard Operating Procedures (SOPs) and updating existing procedures.
- Improve efficiency by implementing LEAN principles in work cells, example: 6S.
- Project Management
- Present project progress to stakeholders by reviewing current metrics and comparing to project goals.
- Delegate specific tasks to points of contact in various departments to ensure progression of project objectives.
- Facilitate recurring meetings with internal and external team members to get the most updated status of project tasks.

### Manufacturing Engineer II at AGC Electronics America

**08/2019 – 03/2022**

- Increased safety and reduced a production process' operation time by approximately 60% by expanding use of existing equipment to automate process.
- Interface with vendors to discuss manufacturability, request quotes, coordinate purchase and delivery of critical spare parts for equipment maintenance.
- Created detailed technical drawings using SolidWorks by using drafting best practices and GD&T principles.
- Designed custom fixtures and tooling for various internal customers by being an active participant on the production floor with a "go and see" mentality to understand the specific need and tailor a solution.
- Performed root cause analysis with tools such as Ishikawa Diagrams, 8D, and 5 Whys.

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- Communicated project status updates via PowerPoint presentations with color-coded progress indicators. Created custom Excel project trackers with progress bars and deadline indicators.
  - Used control charts to monitor key equipment parameters for indications of upcoming required maintenance.
  - Maintained communication with vendors via phone calls and email to communicate design changes and to procure tooling.

#### **Manufacturing Equipment Technician at Intel Corporation**

**04/2019 – 08/2019**

- Troubleshoot complex manufacturing equipment in a team of other equipment technicians.
- Remained up-to-date on job-related trainings, taking courses as they arose and as job functions demanded.
- Replaced faulty components after troubleshooting using a variety of hand, power, and diagnostic tools.
- Read and understand specifications by Tool Owners to find information necessary to complete tasks.

#### **Mechanical Engineer at DCI International**

**12/2017 – 11/2018**

- Balanced multiple competing projects under changing priorities by maintaining a running spreadsheet of each project, its due date, and most recent progress in Microsoft Excel.
- Updated CAD designs in SolidWorks to match manufacturers' capabilities.
- Worked in a cross functional team environment expanding across multiple internal departments to ensure quality, purchase, and arrival of prototype parts.
- Conducted root cause analysis on defective product by troubleshooting, testing, and documenting findings.
- Designed custom production fixture for assembling parts by using SolidWorks to create CAD models and then crafted the fixture using the Milling Machine.
- Created replacement parts for custom tooling by referencing original CAD drawings and using the Lathe and Mill to machine parts to specification.

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### **SKILLS, INTERESTS, MISCELLANEOUS**

#### **Data Science:**

**Supervised Learning:** K-Nearest Neighbors, Naive Bayes (**Bayes Theorem**), Logistic Regression, Feature Engineering

**Unsupervised Learning:** Principle Component Analysis (PCA), Clustering

**Statistics:** **Confidence intervals**, **hypothesis testing**, Analysis of Variance (ANOVA)

**Software/Applications:** Visual Studio Code, Jupyter Notebooks, Airflow, Railway, SQL Pathfinder, Scripghost Job Manager, TOAD Datapoint, MinIO, Postgres, Command Line, SolidWorks, Microsoft Word, Excel, PowerPoint, Outlook, SAP

**Programming Languages:** SQL, Python, R Studio, VBA

**Dashboards:** PowerBI, Grafana

**Tools:** Ishikawa Diagrams, 8D, 5 Whys, Process Flow Charts

**Languages:** English (fluent), Spanish (fluent)

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### **VOLUNTEER EXPERIENCE**

#### **Volunteer Tutor at the Cornelius Public Library**

**2023 - 2024**

- Homework Help: Assist students of various grade levels 3 - 12 with homework in subjects such as math and writing.
- Tech Help: Guide library patrons through learning exercises with regards to technology such as composing emails; using internet search engines; and setting up their devices.
- Staff Support: Provide technical support to troubleshoot Microsoft Excel VBA scripts as needed.

#### **STEM Advocate**

**April 2024**

- Capitol Hill Day of Advocacy | Society of Hispanic Professional Engineers (SHPE)
- Met with congressional staffers to express the need for increased monetary support for non-profit organizations like SHPE.

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- Shared personal experiences for navigating college and into careers as a first-generation high school and college graduate.
  - Strategized in a focused team to develop a cohesive and seamless pitch for enhanced support for groups like SHPE.

#### **STEM Activity Leader**

**2023**

- Noche de Ciencias | Society of Hispanic Professional Engineers (SHPE)
- Led elementary school students through engaging STEM activities to highlight first scientific principles.
- Spoke with parents about what a career in STEM could look like, and gave personal testimony about how to navigate the education system as a first generation student.
- Program Staff

#### **4-H Youth Development**

**2014 - 2024**

- Supported event-day logistics by facilitating workshops; leading students between locations; and aiding other staff as needed.
- Drove students to and from their communities to Oregon State University in Corvallis, Oregon for the event.
- Provide technical support for electronics setup such as projector setup, audio/visual setup, and general technical troubleshooting.