Michael P. Lanza
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Professional Engineer skilled in complex problem solving with a passion for Data Science and Data Analytics

Education:

Drexel University Philadelphia, PA
MS in Mechanical Engineering Graduated June 2012

GPA: 3.41

Related Courses: Applied Engineering Analytical Methods, Probability & Statistics, Numerical Analysis, Robust Control Systems, Automated Cars, Advanced Dynamics, Engineering Reliability, Engineering Economic Analysis, Engineering Management

Relevant Software, Courses, Certifications, and Projects:

Software: R, Python, MySQL, GNU Octave, MATLAB, Maple, VBA for Excel, Microsoft Office Enterprise, Agilent Vee, LabVIEW, Visual Basic Express

Courses/Certifications: Datacamp's Data Scientist with R Track, Datacamp's Data Scientist with Python Track, Microsoft Professional Program for Data Science, UC San Diego's Data Science MicroMasters Program, Stanford University's Machine Learning

Projects: Performed exploratory data analyses, cleaned data, generated new features, and trained and tested various machine learning algorithms to the datasets provided by Kaggle competitions, specifically Digit Recognizer, Titanic Machine Learning from Disaster, and Instacart Market Basket Analysis utilizing Python and R.

Employment Experience:

Troemner Thorofare, NJ
Product Design Engineer September 2016-Present

- Successfully designed, developed, and managed all aspects of the product launch for the next generation Vortexer Product Line from conceptual design to release to market, exceeding all posted project milestones.
- Developed testing protocols and performed analytical studies to validate materials for use in new product design. Tests were performed across a range of operating environments and with various part configurations to determine the optimal design in the areas of cost, performance, and ease of assembly.
- Support specialist for the Global business division. Support includes individual product troubleshooting, product return analysis and resolution, and product portfolio expansion in global markets.

Troemner Thorofare, NJ
Manufacturing Engineer July 2015-September 2016

- Drove assembly process improvements through the statistical analysis of production and return data based on Lean/Six Sigma principles with the goal of reducing BOM costs, production time, and manufacturing failures. Examples include performing Cp, Cpk, Pp, and Ppk studies along with Gage R&R evaluations.
- Held Monthly Quality Meetings to present findings and suggestions to upper management for new action items and projects to improve throughput and efficiency on the Assembly floor.
- Developed custom software tools using VBA and SQL to improve the capture of in-process assembly information.
- Developed custom reports and dashboards to provide real-time analyses based on current and historic production data using VBA and SQL.
- Addressed in-process assembly turnback failures as they occurred to identify key component improvements and modifications.
- Analyzed all future and current product design changes to provide alternate solutions in an effort to maximize part and assembly manufacturability.
- Led a multi-disciplinary team tasked with reducing in-house and incoming Non-Conforming Material. Responsibilities included designing, developing, and implementing a company-wide Non-Conforming Material Process to identify top contributors based on volume and value. Reporting and analysis generated through SQL and VBA scripting.

Rieker Inc. Aston, PA

Manufacturing Engineer February 2013-July 2015

- Managed all production lines within the facility ranging from electronic assembly to manual fabrication of various inclinometers, tilt switches, and slip indicators.
- Resolved all production issues through research and statistical analysis of historical test data to identify the root cause of each issue and apply solutions to prevent future occurrences.
- Developed software tools utilizing Excel, Visual Basic, SQL, Navicat, and an in-house production tracking software for recording and analyzing production data in addition to generating weekly reports and dashboards for visualization of data.
- Implemented changes to our automated and manual assembly and testing processes to increase output, reduce production time, and reduce scrap using Time Studies and other Lean/Six Sigma production practices.
- Generated procedure and router documentation to accurately portray process steps and track part life cycle from material kitting to shipping for both existing and all future products developed.

HighPoint Solutions East Norriton, PA

IT Consultant July 2012- February 2013

- Provided support and development for the Trackwise and Master Control software suites at various client sites within the US.
- Developed process flow charts to illustrate document life cycles within the supported software and plan out future changes in development.
- Created highly detailed test script documents for validating new software changes and legacy support.

PECO Warminster, PA

Reliability Engineer March 2011-September 2011

- Identified reliability concerns in Top Priority Circuits through the analysis of historical data and generated work orders to prevent reoccurrence.
- Created the company-wide Pole Hit Program to identify telephone poles out of compliance and strategically relocate them to reduce the occurrence of pole hits.
- Managed an underground cable database to keep track of current jobs and potential jobs for the future.
- Performed customer callbacks during major outages and analyzed their outage history for potential reliability concerns.
- Implemented circuit improvements to reduce the probability of future occurrences.

Kulicke & Soffa Industries Fort Washington, PA

Mechanical Engineer March 2010-September 2010

- Worked on the research and design of ultrasonic transducers in wire bonding machines.
- Developed automated testing procedures and reports using Visual Basic to reduce run-time, generate insightful reports, and improve the quality of data extracted from all experiments.
- Created user manuals for all programs created and instruments used.

Additional Computer Skills:

Software: PSV 8.6, GPIB Instrument Control, AutoCAD 2010, Pro/ENGINEER Wildfire 5.0, GPmate, Impact, Passport, Arduino, Trackwise 8.0, Master Control 10.0, SolidWorks