**Ahmed L. Rashed**

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**Professional Summary**

‬‬‬‬Certified LabVIEW Architect & TestStand software engineer specializing in automated test development, process optimization, data analytics and visualization. Picked up Python and SQL on-the-job to drive enhanced data analysis and visualization for my Tech Ops team and to create compelling data-driven reports to upper management. My goal is to transfer my data mining, analysis, and visualization skills from the manufacturing industry to the business intelligence and data analysis field. I hope to leverage my passion for optimization, automated processing, and reliability to a role that allows me to make a difference in the lives of others.

**Technical Skills**

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| * LabVIEW (expert/architect) | * TestStand (expert) | * Statistical Method (advanced) |
| * R (intermediate) | * Python (beginner) | * SQL (beginner) |
| * Data Extract & Transform | * Data Analysis & Visualization | * SW Versioning (Git+Perforce) |

**Certifications**

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| * Google Advanced Data Analytics Certificate (WIP) | * Google Data Analytics Certificate (2023) |
| * Certified LabVIEW Architect (2014) | * Certified LabVIEW Developer (2012) |

**Work Experience**

*LabVIEW Consultant* **- BADGER METER INC** Milwaukee, WI 05/2023 - present

* Reverse-engineered eSeriesGen1 communication drivers from C++ and re-wrote the test software into an extensible DQMH LabVIEW framework.

*TestStand Consultant* **- henny penny**Eaton, OH 11/2022 - 08/2023

* Created generic database extractor for viewing production data, publishing it to the company web app for manufacturing engineers to improve product and process performance.
* Enhanced configuration and report management, creating portable test limits and custom data visualizations, enabling on-the-fly configuration changes in minutes not hours.
* Debugged and improved TestStand sequences and their underlying LabVIEW code modules for functionality and repeatability, boosting yield from 65% to 99%.
* Restructured TestStand project and its dependencies, allowing one-click distribution and deployment to multiple stations, reducing test station setup time from 3 days to 2 hours.

*TestStand Consultant* **- Granville – Phillips** Broomfield, CO 09/2022 - 01/2023

* Optimized Python data analysis package for general use, empowering line operators to see, understand, and act upon real-time statistical process data without constantly referring to manufacturing engineers.
* Added EtherCAT communication functionality to the 352 Ion Gauge test system using LabVIEW Object Oriented Programming, doubling test stand capacity.
* Updated TestStand sequencer system for robustness, improving pass-fail rate from 75% to 95%.

*LabVIEW Consultant* **- MKS Instruments** Methuen, MA 07/2022 - 10/2022

* Reverse-engineered VoDM test application from LabWindows/CVI and re-wrote the test software into an extensible sub-panel LabVIEW framework.
* Designed LabVIEW test software to run semi-automatically, allowing a single line operator to run five stands simultaneously, improving productivity and tack time four-fold.

*Principal Test Engineer -* **MKS Instruments** Methuen, MA 03/2021 - 06/2022

* Managed software engineering projects (leading teams of 2 – 4 developers) for test station software, guiding junior developers and chairing code reviews and feedback sessions.
* Setup standardized JIRA workflows and trained team-mates on how to use these workflows, improving project visibility and allowing the team to efficiently cover twice as many issues in our weekly meetings.
* Enhanced centralized database connectivity and statistical process control, allowing manufacturing engineers to see trends in production lots and make data-driven decisions from the factory floor.
* Developed various Python scripts to mine, clean, and present field data to management, providing insights to key failure modes to improve customer experience and satisfaction.

*Senior Test Engineer -* **MKS Instruments** Methuen, MA 09/2011 - 02/2021

* Created and published interactive Tableau dashboards for direct access to real-time data. Trained operators, manufacturing engineers, and business unit managers in how to use these dashboards.
* Led development and rollout of internal real-time SPC system for the production floor.
* Developed LabVIEW web service driver to connect all product lines to a central database, allowing engineers and line operators to catch process issues in hours rather than days.
* Upgraded and overhauled several legacy product lines through reverse-engineering the original engineering code and rewriting the test software into a production-ready LabVIEW framework.

*Test Engineer -* **MKS Instruments** Methuen, MA 06/2008 - 08/2011

* Wrote from scratch an automated LabVIEW test software GUI for the stability test of FTIR spectrometers, reducing unit cycle time from 19 days to 12 days.
* Addressed production issues on the floor. Kaizen blitz and FMEA analysis to find root causes of test stand failures and implementing short- and long-term solutions.

**Education**

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| **Master of Arts: Physics**  Bryn Mawr College, Bryn Mawr, PA | **Bachelor of Science: Physics**  UNIVERSITY OF MARYLAND, Baltimore, MD |