Ahmed L. Rashed

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Professional Summary

Personable software engineer specializing in automated testing, process optimization, data analytics and visualization, creating compelling reports to drive data-driven decisions. **My goal is to transfer my data mining, analysis, and visualization skills from manufacturing to business intelligence**, leveraging my passion for problem-solving to a role that makes a positive impact.

Technical Skills

Programming: LabVIEW, TestStand, SQL, Python, R-Studio

Database Systems: MySQL, SQL Server, BigQuery, Advanced Excel (PowerQuery, PivotTable, Slicers, Timeline)

Data Visualization: Power BI, Tableau, Dash Web Apps, Shiny-R

BI Development Lifecycle: Waterfall and Agile workflows, Project Management, Collaboration and Mentorship

Data Analysis & Reporting: Turning questions into queries, data into insights; presenting findings, and recommending actions with real impact on business (revenue growth, cost reduction, boost efficiency and quality)

Certifications

- 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++, re-writing the architecture of the test software into an extensible DQMH LabVIEW framework.

TestStand Consultant **HENNY PENNY INC** Eaton, OH 11/2022 - 08/2023

- **Created a Python script (numpy, pandas) using SQL (complex joins) to extract production data from TestStand database for production engineers to see trends and track process performance.**
- Debugged and re-engineered TestStand (Sequential and Batch processes) and their underlying LabVIEW code modules (custom GUI & reports) for reliability, boosting yield from 65% to 99%.

TestStand Consultant **GRANVILLE – PHILLIPS** Broomfield, CO 09/2022 - 01/2023

- **Optimized Python data analysis package (Scikit-learn) for general use (Dash Web App), empowering line operators to see, understand, and act upon real-time statistical process data.**
- Added EtherCAT communication functionality to the 352 Ion Gauge test system using LabVIEW Object Oriented Programming (OOP), doubling test stand capacity, improving pass-fail rate from 75% to 95%.

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

- Reverse-engineered VoDM test application from C (LabWindows), re-writing the architecture of the test software into an extensible sub-panel LabVIEW framework.
- Designed LabVIEW test framework 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

- **Developed various Python scripts (numpy, pandas) to mine, clean, and present field data (plotly, Dash) to management, providing insights to key failure modes to improve first-pass-yields.**
- Upgraded >50% of test stands' software to incorporate and statistical process control modules, allowing production to see trends and make data-driven decisions from the factory floor.
- Managed software projects for test station software: mentoring junior developers, chairing code reviews.
- Standardized JIRA scrum and kanban workflows and trained coworkers on how to use these workflows.

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

- **Created and published Tableau dashboards (Table Calculations, Filters, Parameters, Top N) for real-time production data. Trained operators, engineers, and managers to use these dashboards.**
- **Led development and rollout of internal real-time Statistical Process Control (Xbar & R Charts, Gage R&R, Cpk, and KPI) 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 R&D code and rewriting the architecture of the test software into a production-ready LabVIEW framework.
- Developed LabVIEW web service driver to connect all product lines to a central database (Visual Factory), allowing engineers and line operators to catch process issues in hours rather than days.

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

- Sustaining production by resolving issues on the floor. Kaizen blitz and FMEA analysis to find root causes of test stand failures, implementing short- and long-term solutions using Cpk and KPI characterization.
- Developed from scratch the LabVIEW test software framework for the automated stability test of FTIR spectrometers, reducing unit cycle time from 19 days to 6 days.

Scientist II **SYMMETRICOM** Beverly, MA 09/2005 - 05/2008

- Executed electronic design, debugging, and documentation for next-generation atomic clocks.
- Programmed Texas Instruments MSP430 MCU, utilizing AQ430 tool in embedded C.
- Improved Rubidium Atomic Clock production yield, resulting in a successful Green Belt project.
- Developed LabVIEW software for production Automatic Test Equipment.

Education

Master of Arts: Physics
BRYN MAWR COLLEGE, Bryn Mawr, PA

Bachelor of Science: Physics
UNIVERSITY OF MARYLAND, Baltimore, MD