Ahmed L. Rashed

Google Certified Data Analyst | 781-309-7560 | *GitHub Portfolio* | *arashed07@gmail.com*
| Lynn, MA | *LinkedIn Profile*

Professional Summary

Highly analytical and process-oriented data cruncher with over 10 years of experience in Mfg Quality Engineering. Skilled with SQL, Python, and R for data mining, data modeling, statistical analysis, business intelligence gathering, trending, and benchmarking. Created machine learning regression models on device data streams to pre-emptively classify CTQ device faults before Final Test, cutting rework times by 25% and increasing throughput by 10%.

Technical Skills

Data Analytics: SQL, R, Python, Tableau, Power BI (PowerQuery, DAX), Statistics, Excel (XLOOKUP, PivotTables, Slicers).

Database & Project Management: EDA, ETL, SQL Server, Azure Data Studio, Google BigQuery, Agile, Scrum, JIRA, Git.

Business Intelligence: Requirements gathering, technical specifications, problem-solving, analytical skills, continuous improvement, data visualization, root-cause corrective actions, turning questions into queries and data into insights.

Data Projects

Housing Prediction Model: ***Personal*** *HPM GitHub Link* 10/2023

Built and optimized a predictive regression model of housing prices with historical CA housing data.

- Tools Used: Jupyter Notebook, Pandas, Pathlib, Matplotlib, Seaborn, Scikit-learn.

COVID-19 Retrospective: ***Personal*** *Cov19 GitHub Link* 09/2023

Explored and visualized COVID's most affected countries, highest death rates, and fastest vaccination rates.

- Tools Used: Azure Data Studio, T-SQL, Tableau, Interactive Data Visualization.

Bike Sharing Analysis: ***Capstone*** *BSA GitHub Link* 07/2023

Exploratory data analysis to identify how casual riders and annual members use bike-sharing differently.

- Tools Used: R, RStudio, Data Extraction, Data Cleaning, Data Transforming, Data Interpretation.

TestStand DB Converter: ***Henny Penny*** *TSDB GitHub Link* 01/2023

Created python utility to extract and transform data from TestStand SQL database schema into flat CSV files.

- Tools Used: NI TestStand, SQL Server Management Studio, T-SQL, Python, PYODBC, Pandas.

Work Experience

Consultant **HENNY PENNY** Eaton, OH 11/2022 - present

Debugged and re-engineered TestStand sequential and batch processes and LabVIEW code modules, boosting yield from 65% to 95%. Implemented data hooks to identify key metrics and transform raw data into meaningful, actionable information through automated extraction and standardized reporting.

- Created various Python scripts (numpy, pandas) using SQL (complex joins) to extract and analyze factory data, enhancing build quality and saving Mfg engineers over 15 hours each week in manual data manipulation.
- Collaborated with test engineers to develop ETL processes to facilitate the movement of data between systems, identifying patterns and insights in the data, reducing failure rates from 35% to 2%.

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

Designed, developed, and validated additional EtherCAT communication feature to the 352 Ion Gauge system using LabVIEW object-oriented programming. Also collaborated with other team members to integrate the new comm functionality into the existing TestStand system, applying data-driven metrics to optimize Mfg process.

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- Implemented Python predictive analytics (Scikit-learn) on test-unit data streams to pre-emptively classify CTQ device faults before Final Test, cutting rework times by 25% and increasing throughput by 10%.
- Deployed Mfg Statistical-Process-Control dashboards, improving first-pass-yield rates from 75% to 95%.

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

Managed test station software projects, ensuring quality and reliability of software through comprehensive testing and analysis. Picked up Python and SQL on-the-job to drive enhanced data analysis and visualization for Tech Ops and Business Unit teams, creating compelling data-driven reports to upper management.

- Extracted and extrapolated Mfg data using Python, SQL, and Excel for monthly quality reports, preventing over $50,000 in lost annual revenue by catching product quality defects BEFORE they leave the factory floor.
- Monitored key performance metrics and used data to identify actionable opportunities to increase efficiency and make high-quality decisions that drive performance improvements, boosting first-pass yields by 33%.
- Designed and built statistical analysis models on large data sets using Minitab and Azure Data Studio that helped reduce product rework and post-processing test-time by 15%.
- 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

In addition to sustaining production, incorporated extensive upgrading and overhauling legacy product lines. Reverse-engineered original R&D code, rewriting the architecture of test software into robust, data-driven, user-friendly applications, improving the quality, reliability, and efficiency.

- Connected Tableau dashboards to centralized data-pipelines for real-time production data tracking, improving average time-to-bug-fixes by 20% and highlighting time-sinks in factory workflows.
- Created visually impactful dashboards and executive data visualizations in Tableau to track production yields and failure modes, saving test engineers over 10 hours weekly in diagnostics and manual reporting.

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

Sustained production by creating and updating test software, troubleshooting test stand issues and malfunctions. Maintained test software to ensure the quality of products, resolving stand problems to keep production moving.

- Kaizen blitz and FMEA analysis to find root causes of test stand failures, implementing short- and long-term solutions using Cpk and KPI characterizations.
- Developed LabVIEW test software framework for FTIR spectrometers, reducing unit cycle time from 19 days to 6 days.

Project Engineer **SYMMETRICOM** Beverly, MA 09/2005 - 05/2008

Responsible for designing, building, testing, and troubleshooting complex electronic circuits that were used to control and measure the frequency and stability of novel atomic clocks. Wrote documentation to describe the design and operation of the circuits and firmware. Transitioned to manufacturing support.

- Developed LabVIEW test software for production Automatic Test Equipment.
- Monitored and modified production performance using execution plans and key-process indicator (KPI) tuning.
- Lead high-visibility Six Sigma Green Belt project, improving Rubidium Atomic Clock production yield from 88% to 95%.

Education

Google Advanced Data Analytics Certificate *Google Data Analytics Professional Certificate*

Master of Arts *(Physics)*: BRYN MAWR COLLEGE **Bachelor of Science** *(Applied Physics)*: UMBC