

Omar Ali

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Education

University of Illinois at Urbana-Champaign:

Bachelor of Science in Mathematics

Bachelor of Science in Chemistry

December 2012

GPA: 3.24/4.00

Highlighted Projects

Python-based Numerical Integration Application

McCampbell Analytical

- Interactively integrates area under curve based on screen capture image
- Includes GUI (tkinter/OOP)

August 2018

Data Cleanup and Calculation, VBA Macro

Center for Chemistry and Technology

- Finds paired quality control samples in ICP-OES structured data set
- Immediately adopted by entire lab staff due to ease of use

August 2016

Work Experience

McCampbell Analytical:

August 2017 – Present

Research & Development Analytical Chemist

Pittsburg, California

- Corrected faulty software algorithms by writing image parsing numerical integration program in Python
- Set up analytical methods for wide range of instrumentation, including GC-FID, GC-MS, and HPLC
- Serve as *de facto* technical consultant, receiving high praises for clear communications with clients
- Routinely query data in MS Access-based LIMS database and process data in Excel

Northwestern University:

September 2016 – August 2017

Quantitative Bio-Element Imaging Center, Research Technologist II

Evanston, Illinois

- Designed analytical QA/QC program for glioblastoma FDA clinical trial, establishing acceptance criteria
- Prepared data validation packages, including statistical analyses and graphical summary of results
- Trained graduate students in data analysis, illustrating common discrepancies indicative of error
- Configured new instrument software, evaluating analytical performance through Excel graphics
- Used R to select appropriate calibration model based on regression diagnostics

University of Illinois, Urbana-Champaign: *Various Titles Held*

August 2008 – August 2016

Center for Chemistry and Technology, Assistant Analytical Chemist

March 2014 – August 2016

- Maintained trace metals laboratory, including experimental design, troubleshooting, and scheduling
- Wrote dynamic, user-friendly VBA code to parse, seek, and compute QC criteria in large data array
- Increased sample throughput by factor of four for time-sensitive project

Illinois State Geological Survey, Geochronology Lab Technician

February 2010 – October 2012

- Performed radiocarbon dating for archeological artifacts, including analyzing data via MS DOS
- Headed data processing, including statistical calculations and graphics via VBA and MS Excel
- Recovered corrupt files from destructive analysis, merging disparate data into cohesive results

Technical Skills

Chemistry & Life Sciences:

- HR-ICP-MS, LA-ICP-MS
- IC, IC-FI/ICP-MS
- GC-MS, GC-FID
- PCR/PAGE
- ICP-OES

Math & Statistics:

- Logistic Regression
- ANOVA/ANCOVA
- Model Selection
- Linear Algebra
- Time Series

Software Packages:

- MS Office & Excel
- LIMS–Omega

Operating Systems:

- Windows
- Linux

Languages:

- MATLAB
- Python
- SQL
- VB
- R
- C