

# Omar Ali

Concord, CA · Omarh90@gmail.com · github.com/Omarh90

## 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

McC Campbell Analytical

August 2018

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

### Data Cleanup and Calculation, VBA Macro

Center for Chemistry and Technology

August 2016

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

## Work Experience

### McC Campbell Analytical:

August 2017 – Present

Pittsburg, California

- Research & Development Analytical Chemist
- 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

Evanston, Illinois

#### Quantitative Bio-Element Imaging Center, Research Technologist II

- 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