

# 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

### **Melissa Informatics:**

November 2018 – Present

Knowledge Engineer

Berkeley, California

- Writing R NLP analytics script to digitize medical record scans and perform semantic parsing
- Maintain legacy code for medical database ETL and harmonization using SQL and Python
- Assisting in team building, including technical interviews and project management

### **McCampbell Analytical:**

August 2017 – October 2018

Research & Development Analytical Chemist

Pittsburg, California

- Corrected faulty software algorithms by writing image parsing numerical integration program in Python
- Served as *de facto* technical consultant, receiving high praise for clear communications with clients
- Routinely queried data in MS Access-based LIMS relational database, processing data in Excel

### **Northwestern University:**

September 2016 – August 2017

Quantitative Bio-Element Imaging Center, Research Technologist II

Evanston, Illinois

- Prepared data validation packages, including statistical analyses and graphical summary of results
- Used R to select appropriate calibration model based on regression diagnostics, including graphics
- Trained graduate students in data analysis, illustrating common discrepancies indicative of error

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

August 2008 – August 2016

Center for Chemistry and Technology, Assistant Analytical Chemist

March 2014 – August 2016

- Wrote dynamic, user-friendly VBA code to parse, seek, and compute QC criteria in large data array
- Increased throughput four-fold for time-sensitive project by streamlining analytical processing

Illinois State Geological Survey, Geochronology Lab Technician

February 2010 – October 2012

- 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
- Glass welding
- PCR/PAGE

#### **Math & Statistics:**

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

#### **Software Packages:**

- MS Office/Excel
- Virtuoso

#### **Operating Systems:**

- Windows
- Linux

#### **Languages:**

- MATLAB
- Python
- SQL
- R
- C