

# Omar Ali

San Francisco, 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

### EHR Clinical Database Harmonization: Python, SQL, NoSQL, XML, AWS

Melissa Informatics

- Overhauled ETL legacy pipelines for tenfold SQL DB scaleup & extensive schema changes December 2018
- Remediated data integrity for patient IDs, creating graphics to illustrate data corruption cause and scope

### NLP Histopathology Scan Digitization: R, SQL, ML

Melissa Informatics

- Independently wrote prototype for medical file NLP processing, including advanced statistics March 2019
- Compared multidimensional feature clusters to differentiate medical forms using matrix algebra

### Image Processing Numerical Integration Application: Python

McCampbell Analytical

- Identifies features and numerically integrates signal to correct erroneous software calculations August 2018
- Includes UI (OOP-tkinter), automatically generating report using multinomial calibration and OCR

## Experience

### Code for San Francisco:

July 2019 – Present

ShelterTech Dev & Analytics Team

(Volunteer)

- Critiqued CA Department of Motor Vehicles website through DMV Strike Team user interface testing
- Active member of ShelterTech data & dev team, supporting website hosting homeless resources in SF

### Melissa Informatics:

November 2018 – June 2019

Knowledge Engineer (Data Engineer)

Berkeley, California

- Integrated EHR databases, independently troubleshooting and learning NoSQL tech stack for scale-up
- Analyzed histopathology scans using R, including ML, NLP, & OCR analysis, and database export
- Designed and conducted technical interviews, trained new staff, wrote onboarding documentation

### McCampbell Analytical:

August 2017 – October 2018

Research & Development Analytical Chemist

Pittsburg, California

- Wrote Python image processing program to correct faulty software calculations, including user interface
- Routinely queried data in MS Access-based LIMS relational database, processing data in Excel
- Developed organic chemistry extraction methods and served as technical client consultant

### Northwestern University:

September 2016 – August 2017

Quantitative Bio-Element Imaging Center, Research Technologist II

Evanston, Illinois

- Prepared clinical early phase I FDA data validation package, using QC statistics and graphical summaries
- Trained graduate students in data analysis and troubleshooting in R, and maintained lab's WordPress site
- Troubleshoot multi-dimensional data processing from laser ablation optical emission mass spectrometry

### University of Illinois, Urbana-Champaign:

March 2014 – August 2016

Center for Chemistry and Technology, Assistant Analytical Chemist

Champaign, Illinois

- Wrote dynamic, user-friendly VBA code to parse, seek, and compute QC criteria in large data array
- Increased throughput four-fold for ICP-OES analysis, including streamlining data processing

## Technical Skills

**Programming Languages:** Python, R, MATLAB, VB, C/C++ · **Web:** HTML, XML, AWS, WordPress

**Database:** PostgreSQL, MySQL, Virtuoso, NoSQL · **Stats:** Machine Learning, ANOVA, Time Series

**Developer Admin:** Jira, Git, Confluence · **OS:** Linux, Windows · **Software:** MS Office & Excel

**Chemistry & Life Sciences:** HR-ICP-MS, GC-MS, HF, HPLC, PCR/PAGE, Syringe technique