

# Omar Ali

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## Highlighted Projects

**EHR Clinical Database Harmonization: Python, SQL, XML, NoSQL, 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

**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

**FreightVerify:** November 2019 – Present  
AI Engineer San Francisco, CA  
· Wrote map visualization tool in Python to automate inspection and characterization of shipping routes  
· Quantified anomalous route behavior by introducing physics calculations into SQL data pipeline

**Code for San Francisco:** July 2019 – October 2019  
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

**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  
· Guided quantitative development of scientific calculations for novel experimental setups, including DB

**Northwestern University:** September 2016 – August 2017  
**Quantitative Bio-Element Imaging Center, Research Technologist II** Evanston, Illinois  
· Prepared clinical early phase I FDA data validation setup for gene-therapeutic glioblastoma trial  
· 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: Various Titles Held** August 2008 – August 2016  
**Illinois State Water Survey, 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 ICP-OES analysis, including streamlining data processing  
**Illinois State Geological Survey, Geochronology Research Assistant** 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

## Education

**University of Illinois at Urbana-Champaign:** December 2012  
Bachelor of Science in Mathematics GPA: 3.24/4.00  
Bachelor of Science in Chemistry

## Technical Skills

**Programming:** Python (keras, pyspark, pandas, tkinter), R, MATLAB, C/C++ · **Web:** XML, AWS  
**Database:** SQL, NoSQL · **Stats:** Machine Learning/Deep Learning, ANOVA, Regression, Time Series  
**Developer Admin:** Jira, Git, Confluence · **OS:** Linux, Windows · **Software:** MS Office, Excel (VBA)