

Yang Dai

DATA SCIENCE · PROGRAMMING · ENGINEERING

247 Presidents Lane, Quincy, Massachusetts, 02169, US

☎ (+1) 510-363-6334 | ✉ daiy@mit.edu | 🏠 www.yangdai.info | 📺 superyang713 | 🌐 yangdai713

Education

University of Utah

Salt Lake City, Utah

PH.D. IN PHYSICAL CHEMISTRY

Jun. 2011 - May. 2017

- Thesis: Electronic Characterization Of Size-Selected Platinum Clusters and Modification Through Atomic Layer Deposition.

Experience

Massachusetts Institute of Technology

Cambridge, Massachusetts

POSTDOCTORAL FELLOW

Jun. 2017 - Exp. Jun. 2019

- Transitioned data analysis method from conventional Excel-like spreadsheet to Python Scripting for improved automation and result reproducibility.
- Increased the accuracy of experimental results by introducing new algorithm and data modeling method to our previous analysis techniques.
- Built a remote pressure monitor web app for lab instruments to increase lab safety and productivity.
- Created a custom jupyter notebook docker image that contains all the necessary packages for lab data analysis. Simplified environment setup for colleagues who are new to python.

University of Utah

Salt Lake City, Utah

RESEARCH ASSISTANT

Aug. 2011 - May. 2017

- Designed, fabricated and maintained a sophisticated surface science apparatus from the ground up, as a result of a collaboration with 7 other research institutes.
- Created multiple data analysis templates for processing lab data generated from the custom instrument.
- Wrote LabView programs for data acquisition and system control.
- Preliminary results disagreed with those documented by our collaborator. As a result, designed and conducted additional experiments, and upon data interpretation and literature search, discovered nanoparticle size effect.

Projects

Python Package for Research Data Processing and Analysis

WWW.GITHUB.COM/SUPERYANG713/LABCODE

- Wrote a Python Library for preprocessing, modeling, and visualizing data collected from various surface science instruments.

Personal Tech Blog

WWW.YANGDAI.INFO

- Built a personal website using Django and PostgreSQL as backend, and deployed it on AWS.

Skills and Certification

Certification AWS Solution Architect - Associate

Programming Python, C++, JavaScript

Data Science Numpy, Pandas, Matplotlib, Scikit-Learn, Keras, Tensorflow

Web Django, HTML, CSS

Tools Emacs, Vim, Git, Jupyter Notebook, Shell, Docker, SQL, LaTeX

Languages English, Chinese, Japanese (intermediate)