

Jacky Lao

5032 Forbes Avenue, SMC-3006
Pittsburgh, PA 15219
☎ (949) 677 2165
✉ jackyl@andrew.cmu.edu
📄 <https://github.com/selwyni>
U.S. Citizen

Education

2015

2019

Carnegie Mellon University, *B.S. Materials Engineering, Statistics & Machine Learning (Double Major)*, Pittsburgh, PA.
GPA - 3.89

Experience

2016

Research Assistant, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Assisted Sudipto Mandal and the Rollett Group on projects involving analysis of DREAM3D software and evpFFT data
- Wrote R scripts and m-files to analyze the accuracy of DREAM3D generation algorithms
- Performed canonical correlation analysis on evpFFT data to quantify relationships between microstructural features and macrostructure properties
- Built a basic ETL pipeline with reusable and generic functions in Python and R
- Wrote batch processing functionality to the stochastic microstructure modeling software

2015

2017

Production Manager, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Streamlined rehearsal room reservation process and shortened average waiting times by 30 minutes
- Scheduled major checkpoints and ensured execution of milestones
- Facilitated conversations between board of directors and production board
- Developed contingencies for problems that would negatively affect production

2015

2017

Set Designer, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Designed the set for an entirely student written and produced production
- Maintained open lines of communications between directors and implementers to achieve the artistic vision

2015

2017

Stage Manager, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Maintained communication between all production members
- Organized rehearsals for thirty people

Papers and Projects

2016

Projects in Rollett Group, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Sudipto Mandal, Jacky Lao, Sean Donegan, Anthony D. Rollett, "Generation of representative three-dimensional microstructure for two-phase titanium alloys." (In review)
- Application of data mining and data science techniques to microstructural data
- Image analysis and processing of micrographs of titanium alloys

2017

Finalist - Tartan Data Science Cup, CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA.

- Prototyped a gradient boosted decision tree model in R, in six hours
- Made predictions of loan statuses from an imbalanced dataset presented by Capital One

Technical Skills

Proficient: Python, C, R, MATLAB, LaTeX

Familiar: Rust, SQL, Git, Linux, Mathematica, ParaView

Instrumental: Optical Microscopy, X-Ray Diffraction, Scanning Electron Microscopy

Relevant Coursework

Probability Theory*, Functional Programming*, Imperative Programming, Introduction to Computer Science, Differential Equations, Concepts of Mathematics, Engineering Statistics, Machine Learning (Coursera), Data Manipulation at Scale (Coursera)*

*Currently Taking