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U.S. Citizen

Jacky Lao

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 Univeristy, 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
- Mounted and polished Ti-6Al-4V samples for SEM, EBSD

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 titaniun 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