Contact

www.linkedin.com/in/franklin-lee-98173835 (LinkedIn)

Top Skills

Matlab
Mathematica
Teaching

Languages

English (Native or Bilingual)
Chinese (Professional Working)
Spanish (Limited Working)
Japanese (Limited Working)

Honors-Awards

Outstanding Undergraduate Teaching Assistant

Publications

Effect of nonconjugated spacers on mechanical properties of semiconducting polymers for stretchable transistors

Solution-Phase Conformation and Dynamics of Conjugated Isoindigo-Based Donor–Acceptor Polymer Single Chains

Deep Learning Phase Segregation

Comparison of Machine Learning Methods towards Developing Interpretable Polyamide Property Prediction

Patents

System and method for screening homopolymers, copolymers or blends for fabrication

Franklin Lee

Senior Machine Learning Modeling Engineer at Corning Incorporated
Painted Post, New York, United States

Summary

I am an engineer with expertise in materials design and discovery using molecular simulation (e.g., molecular dynamics, Monte Carlo, density functional theory) and data-driven methods (e.g., data visualization, machine learning, deep learning). Current applications include but are not limited to design of novel polymers, formulation optimization, and fundamental understanding of material interfaces. Our team is always looking for those who have strong backgrounds in machine learning and passions for applications in materials science and manufacturing. If you are interested in opportunities to work or collaborate with us, please reach out!

Experience

Corning Incorporated
4 years 10 months

Senior Machine Learning Modeling Engineer
February 2021 - Present (2 years 3 months)
Painted Post, New York, United States

Machine Learning Modeling Engineer
July 2018 - February 2021 (2 years 8 months)
Painted Post, NY

Stanford University
3 years 10 months

Graduate Research Assistant
September 2014 - June 2018 (3 years 10 months)
Stanford, CA

Professor Zhenan Bao's Group, Department of Chemical Engineering and Professor Vijay S. Pande's Group, Department of Chemistry (March 2015 - June 2018)

-Developed a multiscale molecular simulation framework to understand organic solar cell bulk heterojunction morphology

-Applied machine learning and deep learning toward rational device engineering of organic solar cells

Gerald G. Fuller's Group, Department of Chemical Engineering (Rotation; January 2015 - March 2015)
-Investigated the effect of centrifugal motion on the behavior of the hydraulic jump phenomenon for applications in semiconductor processing

Andrew J. Spakowitz's Group, Department of Chemical Engineering (Rotation; September-December 2014)
-Analyzed locus tracking data in cells to develop new theory regarding step size distribution of chromosome motion

Graduate Teaching Assistant
January 2017 - April 2017 (4 months)

CHEMENG 262: Polymers for Clean Energy and Water
Professor Curtis W. Frank, Department of Chemical Engineering
-Held weekly office hours
-Graded homework assignments
-Held exam review sessions

Graduate Teaching Assistant
January 2016 - April 2016 (4 months)

MATSCI 204: Thermodynamics and Phase Equilibria
Professor Alberto Salleo, Department of Materials Science and Engineering
-Held weekly office hours
-Graded homework assignments
-Held exam review sessions

Cornell University
2 years 5 months

Undergraduate Teaching Assistant
January 2013 - May 2014 (1 year 5 months)
Ithaca, NY

CHEME 3900: Chemical Kinetics and Reactor Design (January 2014 - May 2014)
Professor T. Michael Duncan, School of Chemical and Biomolecular Engineering
-Presented weekly in a recitation session
-Graded quizzes

-Held office hours

CHEME 3240: Heat and Mass Transfer (August 2013 - December 2013)
Professor Abraham D. Stroock, School of Chemical and Biomolecular Engineering
-Held weekly office hours
-Graded homework assignments
-Held exam review sessions

CHEME 3230: Fluid Mechanics (January 2013 - May 2013)
Professor Roseanna N. Zia, School of Chemical and Biomolecular Engineering
-Presented weekly in a recitation session
-Held weekly office hours
-Graded homework assignments and examinations
-Held exam review sessions

Undergraduate Research Assistant
January 2012 - December 2013 (2 years)
Ithaca, NY

Yong L. Joo's Group, School of Chemical and Biomolecular Engineering
-Electrospun and characterized metal oxide nanofibers for lithium ion battery cathodes

Grader
January 2012 - May 2012 (5 months)

MSE 2060: Atomic and Molecular Structure of Matter
Professor Richard D. Robinson, Materials Science and Engineering
-Graded homework assignments and examinations

Ethicon, Inc.
R&D Intern
May 2013 - August 2013 (4 months)
Somerville, NJ

Analytical Characterization
-Simulated heat transfer during polymer processing using COMSOL Multiphysics
-Determined crystallinity of polymer during processing using simulated temperature profile as temperature program in differential scanning calorimetry

Ethicon, Inc.
R&D Intern

May 2012 - August 2012 (4 months)
Somerville, NJ

Analytical Characterization
-Measured effect of block copolymerization on glass transition and melting temperatures using differential scanning calorimetry and dynamic mechanical analysis
-Studied viscoelastic properties and thermal stability using capillary rheometry and thermogravimetric analysis to compare various polymer processing conditions

Education

Stanford University
Doctor of Philosophy (Ph.D.), Chemical Engineering · (2014 - 2018)

Stanford University
Master’s Degree, Chemical Engineering · (2014 - 2016)

Cornell University
Bachelor's Degree, Chemical Engineering · (2010 - 2014)