MEGAN LIM

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EDUCATION

UC Berkeley. **Junior.**
B.S. in BioEngineering. **GPA**:
Some Fav Coursework: Organic Chem I, II, Advanced. Physics I, II. Lin Alg/Diff Eq. Multivar Calc. Struct/Inter CS Programs. Biological Transport Phenomena. Engineering Molecules II. Engineering Devices. Quantum Mechanics.

Troy High School. Class of 2016.
Valedictorian.

WORK EXPERIENCE

NASA Tech Intern (Jun-Aug 2018). **NASA Ames Research Center.**
- Focus: Diagnostics and Prognostics (D&P) Research Group algorithms.
- Presented project, The Kalman Kick (see Projects for description), at NASA Intelligent Systems Division showcase among 5 other selected interns.
- Supported D&P Open-Source software release: Designed and compiled an example system model in C language to be included in the Diagnostic Reasoner (DR) algorithm software release.
- Technical writing: DR software user manual, Prognostics Metrics Library Github wiki, and Generic Software Architecture for Prognostics (GSAP) 19 pg wiki.

Writer on Medium (2016 - Present). **30+ articles published.**
- Writer for The Mission, Medium's leading publication and The Startup, Medium's largest publication for entrepreneurs.
- Topics: Kalman Filters, Education, Chaos, Life, Molecular Orbital Diagrams, etc.

UCSF Undergrad Researcher (Aug 2017 - Present, 12 hrs/wk). **Wang Lab, Department of Surgery.**
- Currently training in mouse handling and performing animal surgeries, including perfusion, to better understand arterial venous structure and function.
- Execute various biological tests such as PCR and gel electrophoresis. Worked with a post-doc on a project to study Notch4* and AVM in the brain.

Organic Chemistry Tutor (Jan 2018 - Present, 9-11 hrs/week.). **UC Berkeley.**
- Hired by UC Berkeley Student Learning Center Science Department to tutor Organic Chemistry to undergraduate students.

UC Irvine BioEngineering Intern (Jun-Aug 2017). **Lakey Lab, Department of Surgery.**
- Determined the parameters of the Encapsulator that maximized efficiency and circularity of capsules important for protection of pancreatic islets from immune rejection.
- Implemented Immunohistochemistry Protocol with deparaffinization, rehydration, antigen revival, and immunostaining as well as TUNEL assay. Utilized microtome to prepare sectioned tissue for slides.

BioEngineering Curriculum Committee (Aug 2017 - Present). **UC Berkeley.**
- Collaborate with professors and advisors to write Bioengineering curriculum and courses for concentrations within the major.

Disabilities Student Note Taker (Aug 2016 - Present). **UC Berkeley.**
- Take clear notes for disabled students under UC Berkeley Physics and Computer Science Departments.

PUBLISHED

Basement Physics (Published May 2017). **Author.**
- This book is available for purchase on Amazon.com and Amazon Europe.

Visualizing Linear Algebra and Differential Equations (Published June 2017). **Author.**
- This book is available for purchase on Amazon.com and Amazon Europe.

PROJECTS

Ochem Reax (Fall 2017 - present). ochemreax.com
- Created Organic Chemistry website to help students visualize chemical structure and reactivity. Also wrote accompanying technical documentation. Working improvements: using machine learning to generate reaction steps.

The Kalman Kick (July 2018).
- Inspired by the Summer 2018 World Cup, created an interactive calculator that implements the legendary Kalman Filter algorithm. Interpreting user input of player parameters, it calculates discrete time predictions and generates visual images of the soccer ball's future state on a penalty kick.

Cardiovascular Stent Design Research (July 2018).
- Designing cardiovascular stent based on the NASA pioneered honeycomb pattern used in aerospace applications, Navier Stokes, organic chemistry, physics and 3D printing the developed prototypes.

DABBLED AREAS Technical Writing. Python. HTML. JS. CSS. Autodesk Fusion. Soccer juggling. 1/2 Marathons.