MEGAN LIM

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EDUCATION

- BS BioEngineering, UC Berkeley, 2016-2020
- Troy High School, 2016, Valedictorian

SOME FUN COURSEWORK

Organic Chemistry. Quantum Mechanics. CS Programs. Linear Algebra. BioNanoscience. Chemical Biology. Material Science. Drug Delivery. Machine Learning for Chemistry. Computational Biology.

EXPERIENCE

Merck Research Labs **South San Francisco**

Computational & Structural Chemistry Intern.. Associate Scientist *Jun 2020 to Aug 2020.. to present*

- Training graph convolutional neural networks and performing QM calculations to enhance drug discovery
- Using deep learning to accelerate quantum mechanical calculations on Merck internal compounds
- Working with medicinal chemists to produce videos for Merck's Youtube channel and promote recruitment

Art of Problem Solving

Teaching Assistant *Jan 2020 to present*

- Part of Chemistry World Online Olympiad Training (ChemWOOT) team: grade questions and help prepare students International & USA chemistry olympiads (ICHO & USACO)

Genentech **South San Francisco**

Pharmaceutical Technical Development Intern *Jan 2020 to Jun 2020*

- Used ultrasonic sensors and flow controllers to automate large scale drug development in the Pilot Plant
- Built various web based applications: digital SOP for flowmeter calibrations, automated mass transfer & KLA calculations, a database backend to store information on the various 250 to 1k Liter bioreactors
- Developed website to host my weekly written articles for the Sustainability team
- Filmed & edited videos (visible within Roche network) to lift spirits during COVID
- Made the soccer team to represent Genentech USA in Roche global Switzerland tournament

Prof. Ken Houk research lab **UCLA Chemistry Dept**

Undergraduate Researcher *Jun 2019 to Dec 2019*

- Performed quantum mechanical calculations with Gaussian to study role of a sugar derivative in transferring stereochemical information in the Diels-Alder reaction
- Worked in collaboration with Prof. Neil Garg to verify his lab's experimental results

NASA Ames Research Center **Mountain View**

Tech Intern, Diagnostics & Prognostics Research Group *Jun 2018 to Aug 2018*

- Designed example system models to be included in the D&P algorithm open-source software releases
- Selected to present project, The Kalman Kick, at NASA Intelligent Systems Division showcase, where was chosen to be interviewed for Kiwoba Allaire's Girl STEM Stars video
- Technical writing: DR software user manual, Prognostics Metrics Library Github wiki, and Generic Software Architecture for Prognostics (GSAP) 19 pg wiki

CREATIVE PROJECTS

- **YouTube (2020 to present):** create comedic & educational content for my Youtube channel
- **Medium (2016 to present):** published 60+ articles, writer for 3 of Medium's top publications: The Mission, The Startup, The Writing Cooperative
- **Published books on Amazon (May, June 2017):** wrote and published physics and math books available for purchase on Amazon.com & Amazon Europe
- **The Kalman Kick (2018):** wrote a program that interprets user input of player parameters, calculates discrete time predictions based on the Kalman Filter algorithm, and generates visual images of the soccer ball's future state on a penalty kick. Presented at NASA Intelligent System Division Showcase

OUTREACH

- **Disabled Student Note Taker (2016 to 2019):** took notes for disabled students for UC Berkeley's physics, computer science, organic chemistry, BioE departments
- **Society of Women Engineers, SWE (2016 to 2019):** Outreach Committee, taught engineering and science principles to middle schoolers on Saturdays, mentor HS student to navigate HS & college

OTHER

Skills Python. HTML. JS. CSS. Gaussian. 3D Printing. Technical Writing. Mouse perfusion.
Interests Computational Chemistry. Drug Discovery. STEM outreach. Film Production. Soccer.