

## LUKE CHIANG

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### EDUCATION

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, MA

Leaders for Global Operations (LGO) Fellow

2020 – Present

*Candidate for MBA, MIT Sloan School of Management, May 2022*

*Candidate for SM in Mechanical Engineering, MIT School of Engineering, May 2022*

- Technical Product Manager (Roborace), MIT Driverless - Implemented operator training, retrospectives, and product backlogs to collaborate with software engineers, capture improvements, help prioritization, and increase engineering hours, resulting in an improvement from last place to 4<sup>th</sup> place out of 6 teams
- Recipient of William C. Hanson, Don W. Davis, and Janice A. Klein LGO Leadership Fund
- Subcommittee Chair, LGO Internship Committee; Active member, PM Club; Active member, Tech Club
- Courses: Digital Product Management, Product Design and Development, Artificial Intelligence, Architect and Engineering Software Systems, Engineering Data Science, System Optimization, Intro to Robotics, and Seminar in Quantum Computing

#### UNIVERSITY OF CALIFORNIA, LOS ANGELES

Los Angeles, CA

*BS in Chemical and Biomolecular Engineering, Magna Cum Laude*

2011 – 2015

- Committee Chair, UCLA Engineering Mentorship Program; Mentorship Chair/Club Liaison, Tau Beta Pi

### EXPERIENCE

#### AMGEN

Cambridge, MA

*Graduate Data Science Fellow, Operations Data Strategy*

Summer 2021 – Present

- Generating a machine learning model to predict Amgen's future emission profile based on forecasted drug product demands
- Engaging 13 stakeholders to build a digital scenario planning tool to help guide Amgen's capital investment decisions and achieve 100% carbon neutrality, 40% water reduction, and 75% waste reduction by 2027

#### CARGURUS

Cambridge, MA

*Product Management Intern*

Winter 2021

- Collaborated with engineering team to create 8 ideas and execute 2, improving user subscription by 30%
- Developed and pitched initial strategy to bring Digital Retail to international markets, including competitive landscape analysis, product roadmap, feature prioritization, and potential roadblocks

#### MARATHON PETROLEUM

Carson & Wilmington, CA

*Tech Service Refining Engineer II*

2019 – 2020

- Optimized process unit by clearly defining product specifications and unit bottlenecks and working with operations to systemically increase Jet fuel processing into Diesel by 20% during the Covid-19 pandemic, capturing \$1.2M in one month
- Led a team of 12 including engineers, operators, and contractors to identify root cause and provide process optimizations to improve water separation issues, leading to a 20% increase in diesel production and \$8M/year in profits
- Convinced local refinery leadership team to perform an extended startup to restore approximately 6% of catalyst activity after an emergency shutdown, avoiding \$4M loss profit from reduced production rate

*Tech Service Refining Engineer I*

2017 – 2019

- Leveraged expertise of multi-disciplinary team of 7 to eliminate root cause of corrosion and failures of heat exchangers which had cost \$1.5M over the past 10 years
- Engaged Operations on deficiencies in current process control scheme and in turn advised Process Controls in redesign of artificial intelligence's objectives, generating \$1M/year in recovered propylene
- Spearheaded conception, design, and installation of pipe to redirect gasoline for benzene processing, thereby expanding refinery flexibility and avoiding a loss profit of \$3M/month

*Entry Process Engineer*

2016 – 2017

- Increased throughput by 20% and profit by \$4M/year without capital investments by interviewing Operators, systematically identifying and optimizing energy inefficiencies, and building tools to track KPI's
- Challenged commonly believed cause for compressor inefficiencies which cost \$9M over the past 15 years and convinced Operations to set up a sampling schedule to identify real root cause, resulting in a redesign to address new findings
- Persuaded and guided Operations to apply new technologies during start up and shut down by providing economic analysis and Technologist's support, resulting in a reduction in time by 70% and \$700k in business improvement

*Rotational Development Program*

2015 – 2016

- Documented, presented, and trained more than 20 operators on artificial intelligence software, empowering them to troubleshoot and manipulate software to independently drive profitability

### ADDITIONAL INFORMATION

- Skills: Python, MATLAB, R, JavaScript, C++; Languages: Conversational proficiency in Mandarin
- Hobbies: Avid Lakers fan, lifting because cardio is too tiring, mending friendships after Settlers of Catan