Sahil Pai

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EDUCATION

UC Berkeley, College of Chemistry   **Expected Graduation**: May 2020
Degree: Bachelor of Science in Chemical Engineering   **GPA:** 3.43/4.0

SKILLS

- Proficient in MATLAB, Python, COMSOL, Aspen Plus, Simulink, Microsoft Office, LabVIEW, and Java
- Experience in Process Design, Modeling & Simulation, Chemical Engineering Unit Operations, Mass & Energy Balances

PROJECTS

Impingement Heat Transfer, *Unit Operations - Design Project*
- Characterized how the velocity of perpendicular jet flow affects heat transfer at the surface of a nylon-insulated brass rod
- Determined an optimal insulation material in acrylic glass based on an evaluation through COMSOL simulation analysis

Distillation of Water-Ethanol Mixture, *Separations - Design Project*
- Improved process design through a 44% reduction in cost by recycling all cooling water via a water-chiller
- Estimated the optimal reflux ratio through the McCabe-Thiele method

Packed Bed Reactor Simulation, *Reaction Engineering - Design Project*
- Performed mass & energy balances for the production of gaseous benzene via the reaction of methane gas
- Generated the most cost-effective recycle ratio and reactor diameter based on a heat map analysis in MATLAB

WORK EXPERIENCE

N Labs   *June 2018—August 2018*
Research Analyst Intern   *Berkeley, CA*
- Presented research of the latest technological developments in fiber optics to executives and provided recommendations for pursuing promising fields in distributed temperature sensing systems and quantum cryptography
- Composed a report on the FDA process to market the photodynamic therapy (PDT) laser as a clinical medical service

V Technologies   *May 2017—August 2017*
LabVIEW Software Engineering Intern   *Kerala, India*
- Optimized the performance of a Raman medical device by integrating a peak-finding algorithm in LabVIEW
- Developed graphic user interfaces to better equip customers to examine their purchased amplifiers

LEADERSHIP

Teaching Assistant – Chemical Reaction Engineering Course   *August 2018—December 2018*
- Conducted weekly grading for over 120 students on design projects and homework
- Provided feedback using problem-solving techniques through reaction engineering fundamentals

Student Project Lead– Undergraduate Research Lab, ULAB   *March 2018—May 2018*
- Modeled a ventilation system inside a Martian spacesuit glove by supporting a graduate group's research proposal
- Supervised a team of undergraduates that created a numerical simulation in Python and a representative model in SolidWorks

Academic Chair – Community Focused Fraternity   *August 2017— December 2017*
- Implemented and managed a house tutoring program to offer support for members and associates
- Organized events to increase exposure of campus resources for new members

Design Lead – Chemical Engineering Car, Hydrogen Fuel Cell   *August 2017—May 2017*
- Reduced manufacturing costs by 30% without compromising efficiency or performance by improving battery design
- Supervised 5 members that designed and implemented a water-saving plan for college dormitories