



GABRIEL KETRON

ENGINEERING STUDENT

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Davis, California linkedin.com/in/gabriel-ketron/

SKILLS & PROFICIENCIES

- MATLAB, Python, Data Structures
- HTML, CSS, JavaScript, SQL
- CAD (Solidworks, Foldit, Gromacs)
- Advanced Excel Tools
- Enzyme Synthetic Engineering
- DH5a Transformation
- Electroporation
- Miniprep Plasmid Extraction/Lysis
- Science Writing
- CAD and Stem Mentoring
- Project Management
- Public Outreach / Marketing

COURSES & ACHIEVEMENTS

Medical Device Competition

[2nd Place] UCD BMES | Jan 2021

- Prototyped and Laser-cut device to mechanically count pill use.
- Competition included 100+ biomedical engineering majors.

BIM 020 - Fundamentals of Bioengineering | June 2020

- Designed a perfusion bioreactor.
- Analyzed various forms of bioreactors to isolate best conditions for osteocytes.

BIM 167 - Biomedical Fluid Mechanics | June 2021

- Learned mathematics behind fluid motion, like Navier-Stokes.
- Built microfluidic system to keep dynamic similarity with human arteries and capillaries.

BIM 110ABC - Senior Design

- Building a moving tracheoesophageal prosthesis for total laryngectomy patients.
- Surveyed over 50 patients from around the world for their needs.

EDUCATIONAL BACKGROUND

UNIVERSITY OF CALIFORNIA, DAVIS

Bachelor of Biomedical Engineering | 2018 - Present

- Senior, Specializing in Systems and Synthetic Biology
- GPA: 3.156
- Graduating: June 2022
- Student Researcher, Siegel Lab
- Project Manager, B Hours

WORK EXPERIENCE

ENZYME UNDERGRADUATE RESEARCHER

UC Davis Siegel Lab (December 2021 - Present)

- Created enzyme mutations to study the relationship between structure and thermal stability.
- Utilized computational tools like Fold-it and Rosetta.
- Learned wet-lab best practices, plasmid engineering and cell culture techniques.
- Designed 3 enzymes to add to an expanding database.
- Built machine learning algorithms to analyze datasets to predict optimal structures.

STUDENT ASSISTANT

Sacramento Department of Utilities (July 2021 - Present)

- Responsible for budget and accounting operations.
- Performed fiscal year-end management, monthly closing, and financial reporting.
- Tasked with careful data entry for multimillion dollar account transfers between projects.
- Managed large databases and complex spreadsheets for accounting DOU's spending.
- Reviewed requisitions for all purchases made by the DOU to stay on budget.

UROFLOWMETRY DEVICE TEAM LEAD

UroVis Tech & Dr. Eric Kurzrock (Nov 2020 - Present)

- Lead a team of 11 biomedical engineering majors to develop a novel uroflowmetry device for Dr. Kurzrock, a Urologist at the UC Davis Medical Center.
- Coordinated communication between biomedical engineer undergrad researchers and doctors.
- Integrated software into biomedical design with computer science undergrad researchers.