app.fermplot.com
github.com/eoksen

ETHAN OKSEN

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ethanoksen.com

Professional Experience

Washington, DC	**fermPlot**	**Mar 2023 – Present**

Founder

- Founded and operate fermPlot, a company developing a bioprocess application for data processing and visualization.
- Built the fermPlot web application, which enables users to upload, visualize, and analyze bioprocess data, with a focus on flexibility and user experience. **Live Demo**: app.fermplot.com. **Technology**: Python, Dash, Plotly, JavaScript, Docker, Gunicorn, AWS EC2, Nginx, PostgreSQL, Git, pytest, and Locust.
- Implemented a CSV parser to handle data uploads, with an option for automatic data grouping and labeling.
- Built an interactive plotting feature allowing users to select datasets and plot data across up to four axes.
- Orchestrated application deployment using Terraform and Docker on AWS, with Nginx as a reverse proxy.

Emeryville, CA	**Lawrence Berkeley National Laboratory – Advanced Biofuels and Bioproducts Process Development Unit (ABPDU)**	**Aug 2017 – Oct 2021**

Senior Research Associate / Bioprocess Engineer   *Jan 2020 – Oct 2021*

- Worked with over 30 industry partners, ranging from early-stage start-ups to large multinational companies, to develop and/or demonstrate fermentation and downstream processes.
- Led tech-transfer and process development projects with industry partners, supervising research associates and bioprocess engineers. Supervised and mentored interns and student research assistants.
- Held significant project management responsibility. Worked directly with companies to understand their goals and develop statements of work.
- Created standard operating procedures for data export, parsing, and visualization.

Research Associate / Associate Bioprocess Engineer   *Nov 2018 – Jan 2020*

- Developed and demonstrated fermentation and processes for industry and Department of Energy (DOE) programs.
- Used models to estimate the fuel properties of potential target molecules for genetic engineering projects to identify promising biofuel candidates. Included on a patent application for production of cyclopropane molecules.

Intern / Student Research Assistant   *Aug 2017 – Sept 2018*

Education

Baltimore, MD	**Johns Hopkins University**	**Aug 2020 – Aug 2022**

- M.S., Biotechnology, Concentration in Bioinformatics, GPA: 3.94

San Diego, CA	**University of California, San Diego**	**Aug 2019**

- Metabolic Engineering and Microbial Fermentation Workshop

Berkeley, CA	**University of California, Berkeley**	**Aug 2009 – June 2013**

- B.A., Philosophy, GPA: 3.60

Skills

Bioprocess Engineering

- Developing and operating bioreactor systems from single-use 250 mL reactors to 300L pilot systems for microbial hosts.
- Designing and running pilot-scale separation processes — disc-stack centrifugation, TFF, lyophilization, column chromatography, and homogenization.
- Operating and interpreting data from GC-MS, LC-MS/RI/UV, and high-throughput photometric analyzer systems.
- Managing diverse process control software, from custom LabView solutions to proprietary Sartorius platforms.
- Using JMP and Python libraries for data processing and statistics (Pandas and SciPy) and visualization (Matplotlib and Plotly).
- Employing design of experiments (DoE) methodologies.

Journal Articles, Inventions, and Conference Presentations

- **Full list**: ethanoksen.com/publications