# John Schafer

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## Education

**University of California, Berkeley** **Graduation May 2024**
*Master of Science in Systems Engineering, Civil & Environmental Engineering, GPA: 3.715* *Berkeley, CA*

**Montana State University, Honors College** **2021**
*Bachelor of Science in Applied Mathematics, GPA: 4.00* *Bozeman, MT*

**Montana State University, Honors College** **2021**
*Bachelor of Arts in Political Science, GPA: 3.98* *Bozeman, MT*

## Relevant Coursework

- Convex Optimization
- Dynamical Systems
- Statistical Learning
- Automation & Stochastic Control
- Renewable Power Systems
- Energy Data Science

## Professional Experience

**commonFont, Bozeman MT** **2021-2022**
*Solutions Consultant* *Bozeman, MT*

- Implemented survey-based SaaS data platforms and BI tools for enterprise-level clients using Javascript, HTML and AWS. Engineered front-end dashboard visualizations and reporting.
- Produced data analysis/visualization using statistical methods and models as well as recommendation documents/strategic presentations.
- Head of a dynamic team within a growing startup that consulted on the technical and business value of SaaS based initiatives such as varying machine learning tools.

**Honors Freshman Seminar Course MSU** **Spring 2021**
*Teaching Assistant* *Bozeman, MT*

- Facilitated discussion and coursework for a foundational text-based Socratic style seminar.
- Assessed weekly writing assignments and monthly research papers, providing detailed feedback to enhance student learning.

**Math Learning Center MSU** **Aug 2019 - Dec 2020**
*Tutor* *Bozeman, MT*

- Provided tutoring support for subjects ranging from pre-algebra to differential equations.
- Assisted students with homework, project work, and exam preparation on a daily basis.

## Research

**Cal Unmanned Lab: UC Berkeley** **Present**
*Member* *Berkeley, CA*

- Assisting work developing control systems for autonomous UAVs for infrastructure sensing purposes.
- Literature review of robotics methods applied to UAVs.
- Particular focus on evaluating current algorithmic methods of trajectory generation and appllying these methods to infrastructure scanning projects.

**Energy, Controls, & Applications Lab: UC Berkeley** **Present**
*Member* *Berkeley, CA*

- Attending weekly lab meetings regarding the groups research in EV battery management, micro-grid strategies and optimal EV charging.

**Undergraduate Scholar Program Grant Recipient: MSU** **Fall 2020**
*Researcher* *Bozeman, MT*

- Combined insights from mathematical theory to politics and specifically to the issue of autonomy and home ownership in the face of a growing American West wildfire threat.
- Wrote and presented a final thesis paper, "Political Autonomy in a Complex World" at the National Conference of Undergraduate Research.

**Directed Reading Program: Mathematics Department MSU** **Spring 2019**
*Participant* *Bozeman, MT*

- Engaged in a semester-long program that paired me with a Pure Math graduate student and provided funding for textbooks.
- Elected to study Lie Theory and presented work at the end of semester DRP gathering.

**Department of Mathematical Sciences MSU** **Spring 2020**
*Outstanding Scholar Award Recipient* *Bozeman, MT*

- Received the Outstanding Scholar Award in recognition of academic excellence in the field of Mathematics.

## Skills

**Technical:** MATLAB, Python, C, SQL, Scikit-learn, pandas, Javascript, R, Microsoft Office
**Core Competencies:** Technical translation, Interdisciplinary Mindset, Written Communication, Leadership

## Interests

**decarbonizing power systems - nuclear fission & fusion - autonomous systems - skiing & trucks**