DREW GJERSTAD

Minneapolis, MN | ✖✖✖✖✖✖✖ | ██████ | linkedin.com/in/drewgjerstad | DoD Secret Clearance

EDUCATION

University of Minnesota — Minneapolis, MN
Bachelor of Science in Data Science, Minor in Mathematics. GPA: 3.6. — May 2026

- *Awards:* Dean's List for Academic Excellence (2023, 2024)
- *Activities:* University Honors Program, University of Minnesota Rocket Team

Anoka-Ramsey Community College — Coon Rapids, MN
Associate of Arts in Liberal Arts and Sciences. GPA: 3.91. — May 2022

EXPERIENCE

University of Minnesota, Department of Computer Science & Engineering — Minneapolis, MN
Undergraduate Researcher (Supervisor: Assistant Professor Aryan Deshwal) — November 2024 - Present

- Researching high-dimensional black-box Bayesian optimization in combinatorial and mixed-variable (discrete) domains.
- Reviewing literature to examine previous work on black-box Bayesian optimization in discrete settings.
- Experimenting with Bayesian optimization primitives to develop effective methods for optimizing black-box functions in Python using PyTorch, GPyTorch, and BoTorch.

Naval Surface Warfare Center Carderock Division — Bethesda, MD
Naval Research Enterprise Internship Program (NREIP) — May 2024 - August 2024

- Conducted a facility characterization test focused on the performance and capabilities of a variable pressure cavitation tunnel including a systematic review of standard operating procedures, hardware, and software.
- Developed an analysis tool in MATLAB and MATLAB App Designer, using an object-oriented approach, for real-time and post-processing of data from facility characterization tests including time series and signal analysis.
- Data inference and insight methods prototyped in Python and MATLAB for integration with an Oracle APEX database.

University of Minnesota Rocket Team — Minneapolis, MN
Guidance, Navigation, and Control (GNC) Subteam Project Focal — October 2023 - Present

- Leading development for post-processing and in-flight Kalman filters, developed in MATLAB and C, respectively.
- Collaborating on recruitment and onboarding materials.
- Evaluating various validation methods for verifying filter performance and reliability, including NEES and NIS testing.
- Developing final integration components in MATLAB for the post-processing Kalman filter control loop.

Guidance, Navigation, and Control (GNC) Subteam Member — September 2022 - October 2023

- Built preprocessing and loop structure for Kalman filter in MATLAB to enable sensor noise reduction from flight data.
- Created environment data preprocessing methods in MATLAB for a trajectory simulation used to estimate flight paths.
- Analyzed successive convexification approaches to guidance and control systems for potential implementation.

Optum — Minneapolis, MN
Data Scientist Intern — June 2023 - August 2023

- Modeled business integration data in Tableau to identify opportunities to reduce issue turnaround time or issue volume.
- Built interactive dashboards in Tableau for an overview of integrations, root cause analysis, and control charts.
- Designed and implemented a data governance procedure using Python and Pandas to verify modified data models follow defined conventions from a comprehensive data model.
- Developed an automated data quality workflow for data validation, data visualization, and Snowflake data lake integration using custom Python packages and Pandas to perform quality assurance tests on databases.

LANGUAGES AND TOOLS

- **Languages:** Python, MATLAB, R, Julia, C++, SQL, LaTeX
- **Libraries:** Matplotlib, Pandas, Scikit-Learn, TensorFlow, PyTorch, JuMP
- **Tools:** Git, Docker, Tableau, Snowflake, PostgreSQL, Microsoft Excel