Kirin Kawamoto

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PERSONAL PROFILE

- Motivated, inquisitive, and focused student with strong problem-solving skills, working effectively both independently and in teams.

EDUCATION

Bachelor of Science in Aerospace Engineering — University of Colorado Boulder
Bachelor of Science in Computer Science — Expected Graduation: May 2026
GPA: 3.95

Relevant Coursework

- **Aerospace Engineering**: Aerodynamics, Structures, Propulsion, Thermodynamics, Heat Transfer, Aircraft Dynamics, Orbital Mechanics, Attitude Dynamics, Electronics and Communications.
- **Computer Science**: Data Structures, Algorithms, Intro to Robotics, Intro to Artificial Intelligence, Machine Learning, Linear Algebra, Data Science, Numerical Analysis.

TECHNICAL SKILLS

Programming Languages: MATLAB, Python, C, C++, Scala.
Data Analysis: Data Collection, Cleaning, Modeling.
Lab Equipment: Power Supply, Oscilloscope, Multimeter.

RELEVANT EXPERIENCE

University of Colorado Boulder — Boulder, CO

Undergraduate Research – Aerospace Mechanics Research Center — May 2024 – August 2024

- Researched various Computational Fluid Dynamics (CFD) workflows (e.g., PHASTA, HONEE, MORIS), identified challenges in data analysis, and developed new software solutions for improved comparison.
- Gained proficiency in the mathematical models and numerical methods underlying CFD workflows.

Teaching Facilitator – Intro to Dynamics/Systems and Intro to Thermodynamics/Aerodynamics — January 2024 – Current

- Supported instructors in delivering course materials, organizing content, and managing grading tasks.
- Conducted open office hours to support students with lecture material, homework assignments, and exam preparation.

Project and Lab Experience

University of Colorado Boulder — Boulder, CO

Glide Team PM – Vehicle Design Lab — January 2023 – May 2023

- Led a multidisciplinary team in the design, prototyping, and testing of a subscale boost-glide vehicle; used MATLAB to compare performance with theoretical models, achieving results within 5% of predictions.

Aerospace Junior-Level Lab Classes — August 2023 – May 2024

- Introduced and calibrated a MEMS rate gyro and attitude actuators (control moment gyro and reaction wheel) using a spacecraft mockup; designed and implemented an active control system for closed-loop trajectory tracking.
- Simulated and compared nonlinear and linear equations of motion for a quadrotor, investigated trim and static stability, and designed and implemented nonlinear and linear feedback control systems.

Computer Science Classes — August 2023 – May 2024

- Developed and tested an AI application for a customized Mancala game, implementing Alpha-Beta pruning to achieve a 100% win rate against a random player, demonstrating exceptional computational efficiency and strategic ability.
- Engineered and validated a robot controller in Webots for mapping and navigating a kitchen, programming a 6-DOF arm to pick up jars from counter and place them on tables.

LEADERSHIP EXPERIENCE

Caring Transitions of NW Denver — Arvada, CO

Team Lead — December 2018 – August 2023

- Led relocation services for elderly clients; oversaw staff for packing, moving, and resettling into new homes. Oversaw estate sales and cleanouts, ensuring deadlines and client expectations were met.