

# Mason Hawver

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## EDUCATION

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**University of Minnesota, College of Science and Engineering** September 2022 – Expected May 2025  
*Bachelor of Science in Computer Science, Minor in Mathematics* Minneapolis, MN

**GPA: 4.0** | **Selected Coursework:** Computer Vision, Real Time Embedded Systems, Deep Learning for Robotics, Optimal Filtering and Control, Operating Systems, Real Analysis, Differential Equations, Calculus III, and Statistics.

## SKILLS

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**Professional:** Secret Clearance, Teamwork, Critical Thinking, Decision-Making, Technical Writing, and Resilience.

**Technical:** Proficient in C/C++, Python, Git, Linux, Jira, and OpenGL; Beginner in Bash, Java, Assembly and WASM.

**Concepts:** Computer Vision, Embedded Systems, Machine Learning, Software Development, and Computer Graphics.

## WORK EXPERIENCE

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**Software Engineering Intern** May 2024 - August 2024  
*RTX, Collins Aerospace, Mission Systems, Embedded Low-Level Systems and Software* Cedar Rapids, IA

**Accomplishments:** Implemented fixes for 4 major and 6 minor bugs and developed 9 new features on a production team, 3x the expected total of 6 tickets.

Presented the Q3 Plan for the RCU Team to the Mission Systems Directorate, addressing over 200 people, and became the first intern to achieve this.

**Skills Gained:** Embedded Systems Development, Working in Secret Labs, Agile Development, and Networking.

**Development Platforms:** The half-sized and full-sized Domestic Radio Control Unit for the ARC-210 Radio and the half-sized International Radio Control Unit for the AR-1500 Radio.

These platforms serviced many aircraft including the F/A-18 Hornet, F-15 Eagle, Air Force One, A-10 Warthog, C-17 Globemaster III, C-130 Hercules, V-22 Osprey, MQ-25, E-3 Sentry AWACS, HH-60 Pave Hawk, and many more.

## ACADEMIC EXPERIENCE

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**Teaching Assistant, Computer Vision** August 2024 - Present  
University of Minnesota, College of Science and Engineering Minneapolis, MN

**Accomplishments:** Designed homework, teaching students back-projection, homographys, RANSAC, stereo depth estimation, feature engineering, image filtering, SVM classifiers, and convolutional neural networks.

Developed an auto-grading system, improving efficiency by 7x.

**Skills Gained:** Technical Communication and a Deep Understanding of Core Computer Vision Concepts.

**Undergraduate Robotics Researcher** September 2023 - Present  
University of Minnesota, Robotics Perception and Manipulation Lab, Karthik Desingh Minneapolis, MN

**Accomplishments:** Trained vision encoders using self-supervised learning for efficient imitation learning, applied to robotic arm policies in both simulation and on real hardware – UR5e Robotic Arm.

Currently evaluating pre-training methods with different image modalities to advance the field of pretraining.

**Skills Gained:** Self-Supervised Learning, Dataset Creation, Benchmarking, and Imitation Learning for Robotics.

## PROJECTS

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Optimal Control for a Physical Cartpole System, Real Time Embedded Systems Project Present  
Implemented: *Learning High-Speed Flight in the Wild*, Computer Vision Group Project May 2024  
Placed #1 at HackUIowa 2023, University of Iowa's Hackathon October 2023  
Genetic Learning for Simulated 2D Track Racing, Personal Project August 2020