

Daniel Hawker

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EDUCATION

University of Minnesota

B.S. Computer Science, Mathematics Minor (College of Science and Engineering)

September 2022 – Present (May 2025)

Minneapolis, MN

- 3.941 GPA / CSE Dean's List

EXPERIENCE

Graco

May 2024 - Present

Software Engineering Intern

Minneapolis, MN

- Worked on the software development team of ProMix V, Graco's flagship industrial proportioning system.
- Took on a leadership role by reviewing code and providing feedback to the offshore team, and by helping to manage the release cycle.
- Enhanced understanding of software engineering principles and practices, especially those related to embedded systems and automation in control languages like C and Structured Text.
- Developed strong communication and collaboration skills through interaction with diverse teams across different locations and time zones.
- Practiced agile and scrum methodologies, using tools like Jira, Git, and BitBucket.

PROJECTS

github.com/hawkerd

hawkerd.github.io/profile/

ProMix V (Graco)

- Developed robust **embedded software** in **C** and Structured Text, enhancing control processes/ UI.
- Refactored highly coupled sections of the codebase into modular libraries, improving scalability.
- Designed and implemented algorithms to handle proportioning and color changes, reducing waste.
- Led a cross-functional development team across Minneapolis and Delhi, managing pull requests and conducting thorough code reviews to ensure good quality and maintainability.
- Utilized **Git** and **BitBucket** for version control and **Jira** for **agile** project management.
- Applied **Scrum** methodology with bi-weekly sprints, daily standups, and retrospectives.
- Performed extensive testing in collaboration with the hardware team, ensuring correct functionality.

Drone Simulation (University of Minnesota)

hub.docker.com/repository/docker/hawkerd/drone_simulation_final

- Collaborated with a team of three UMN students to develop a comprehensive **full-stack** drone simulation.
- Developed the backend logic in **C++** and integrated it with a frontend UI built with **HTML/ CSS/ TS**.
- Utilized Git for version control, Jira for agile project management, and **Docker** for deployment.
- Implemented advanced design patterns such as Builder, Decorator, and Abstract Factory to enhance system scalability and maintainability.

Sorting algorithm visualizer

github.com/hawkerd/visualizer

- Developed using **C++** with **OpenGL** for rendering, utilizing libraries such as GLFW and GLEW.
- Implemented a client-side **database** system with **SQLite** to efficiently store and retrieve user preferences.
- Gained an in-depth knowledge of sorting and pathfinding algorithms.

SKILLS

- Languages: C, Python, C++, Java, Structured Text, OCaml, x86 Assembly, HTML, CSS, JS
- Practices: Agile, OOP, embedded development, functional programming, software testing
- Tools: Git, Linux, Docker, GDB, Valgrind, UML, MatLab, R

- Problem solving: **algorithms**, **data structures**, design patterns, calculus, **linear algebra**, statistics