

Jake Paustian

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I am seeking a position in software engineering where I can expand upon my skill set and apply my academics and experience to achieve a positive impact.

Professional Experience

Ag Leader Technology **Software Engineering Intern** January 2024 – August 2024

- As an intern for Ag Leader, I worked in a low-level codebase and with physical hardware to solve real-world problems with innovative solutions.
- Developed the networking capabilities of new Ag Leader technology, ensuring farmers have greater access to internet and cellular capabilities.
- I successfully navigated strict deadlines on multiple tasks to ensure our new products met time constraints.

Workiva **Software Engineering Intern** May 2022 – August 2023

- As an intern of the newly formed Structured Content Management team, I was responsible for developing crucial new features for Workiva's WDesk platform, which enabled customers to better structure and manage their financial reporting documents.
- Navigated a large codebase to fix bugs and expand upon existing features.
- Engaged in fast-moving Agile software development amongst an experienced team.

Menards **Hardware Associate** August 2019 – January 2022

Relevant Skills

- Experience in the following programming languages:
 - **Java**
 - **C and C++**
 - **Go**
 - **JavaScript**
 - **TypeScript**
 - **Dart**
 - **Python**
 - **SQL**
 - **Ruby**
- Experience in the following programming frameworks:
 - **React and Redux**
 - **Ruby On Rails**
 - **Qt**
 - **Node.js**
 - **JavaFX**
 - **Spring Boot**
- Can use source control tools like **Git and Perforce** to work efficiently with large teams.

Education

Iowa State University, Ames, IA: Bachelor of Science – Software Engineering

- Expected graduation: Fall of 2024
- Honors: GPA of 3.66

Drake University, Des Moines, IA: 2020-2021

- Honors: GPA of 4.00

Extra-Curricular Coursework:

- Introduction to Machine Learning
- Cloud Computing Software Development
- Introduction to Computer Graphics
- Software Analysis and Security

Other Activities

- I have been an active member of a community of hobbyist console hackers for six years, where I help reverse-engineer retro video game consoles and the games that run on them.
- I participated in martial arts for fourteen years, achieving a third-degree black belt. I have garnered enough recognition from other schools as a competitor and leader to become a judge at regional tournaments.

References available upon request

Above is my resume. Below is the transcript of an interview I had about my resume.

Can you tell me more about your experience as a Software Engineering Intern at AgLeader Technology and Workiva? What were some of the key projects you worked on and what skills did you develop during your internships?

Sure, Workiva first. I got put on the Structured Content Management team. That team was newly formed and their sole purpose was to create new features on the request of our customers. One of the feature's I worked on was called Linking. Basically, accountant's in their documents and spreadsheets often have to reuse the same numbers. This can be hugely frustrating because if a user needs to change one of those figures, they have to manually, by hand, update every cell/formula that used it. Linking allows the user to create one source of truth who's effects would automatically apply everywhere else in their workspace. I also worked on Custom Fields, which was a new feature that allowed users to create their own variables and assign values to them on a per-document basis. For example, a user might put a string for "owner," and boolean for "reviewed", or a datetime for "quarter 4". Then, the user could query their workspace for anything matching those variables.

That sounds like some really impactful work you did at Workiva, especially with the Linking and Custom Fields features. Can you also tell me about your experience as a Software Engineering Intern at AgLeader Technology? What were some of the challenges you faced and how did you overcome them?

Ag Leader was fairly challenging work because it was all low-level programming, versus web-dev. We worked on some really cool new features for Ag Leader's displays. Basically, the Ag Leader displays are the central hub for literally all technology on a tractor. Every hydraulic, sensor, belt, gps, etc, went into the display. I can't speak too much about what I did as it may still be NDA, but I did a lot of work on the networking capabilities of the display, (ethernet, wifi, cell), but I also got to work on their RightSpot product a lot. RightSpot was a computer powered application technology that basically ensured a even application. The problem is, when a tractor with a 70ft long boom arm turns, the inside of the boom is moving much slower than the outside of the boom. This causes uneven application. We used gps and sensor data to correct for this.

It sounds like you had a very hands-on and challenging experience at Ag Leader Technology, working on critical features for their displays and the RightSpot product. Your work on networking capabilities and ensuring even application through GPS and sensor data shows your ability to tackle complex technical challenges. How did you approach learning and adapting to the low-level programming required for this role, especially coming from a background in web development?

Well, web dev wasn't actually my background! I first started programming by joining the Wii modding community. I learned an incredible amount from professional and hobbyist programmers from all over the world. While I am no longer active, I still keep up with many friends from Germany, India, and Guyana! During my time there, I was one of the top developers for mods for Super Smash Bros. Brawl. You may have heard of Project M / Project +.

That's really interesting to hear about your background in the Wii modding community and your involvement in developing mods for Super Smash Bros. Brawl. It's clear that you have a passion for programming and have gained valuable experience collaborating with programmers from different parts of the world. How do you think your experience in the modding community has influenced your approach to software engineering and problem-solving in your professional roles?

It has turned me into a fantastic learner and adapter! Working on these things is not like programming normally. For one, there are no online resources. No guides, no documentation, nothing. Everything is either written in pre-compiled C++ or Nintendo's proprietary languages. I spent a lot of time staring at raw assembly and even a hex editor! That's not too mention that anything custom I made had to run on a Nintendo Wii! It's not only very weak hardware, but of a completely custom architecture! Not only does such a task really drill your ability to learn and experiment, but it also forces you to learn how to be a part of a team. I worked on many teams where I learned much of know today.

It's impressive to hear about the unique challenges you faced in the Wii modding community, such as working with pre-compiled C++, proprietary languages, raw assembly, and the constraints of the Nintendo Wii hardware. Your experience highlights your ability to adapt to unfamiliar environments, learn quickly, and collaborate effectively with diverse teams. These skills are undoubtedly valuable in the field of software engineering. How do you think your experience in the modding community has shaped your problem-solving approach and teamwork skills in your

professional endeavors?

I see that you participated in martial arts for fourteen years and achieved a third-degree black belt. How has your experience in martial arts contributed to your personal development and professional skills, such as discipline, focus, and perseverance?

It toughens you up, that's for sure! I was very lucky to train at a school that was not just for the sport, it was very, very competitive! I traveled all over to compete in tournaments that ranged from region-wide to nation-wide. I had even gained enough respect at many of the tournaments that I was routinely asked to be a judge.

It's clear that your experience in martial arts has not only helped you develop physical strength and discipline but also earned you respect within the competitive community. Being asked to be a judge at tournaments is a testament to your expertise and leadership in the martial arts world. How do you think the skills and values you gained from martial arts, such as discipline, focus, and respect, have translated into your approach to teamwork and problem-solving in your professional endeavors?

It has changed me in such a fundamental way that it's hard to say what exactly I gained. It's everything you just mentioned. It's been drilled so deep into my core that I simply wouldn't be the same person without it.

It's clear that martial arts has had a profound impact on your character and values, shaping you into the person you are today. The discipline, focus, and respect instilled in you through your martial arts training have become integral parts of your identity. These qualities likely play a significant role in how you approach challenges, collaborate with others, and strive for excellence in your professional pursuits. Thank you for sharing your insights on how martial arts has influenced you.

Do you have anything else you like to ask me about on my resume? Anything on there that we haven't already covered?

I'd like to ask about your experience at Menards as a Hardware Associate. How do you think your time working in a retail environment has helped you develop skills that are transferable to a software engineering role?

Absolutely. For one, dealing with customers often times is a test of your patience. For two, working at Menards (and Ag Leader) were things I did during school to afford college. I would during school partially out of necessity, but I always kept a strong GPA while doing it, which shows my ability to timebox myself and keep on top of tasks in a time sensitive manner.

That's a great point. Dealing with customers in a retail environment can definitely test one's patience and communication skills, which are valuable in any professional setting. Additionally, balancing work at Menards and Ag Leader with your academic responsibilities while maintaining a strong GPA showcases your ability to manage your time effectively and stay organized under pressure. These skills are essential in software engineering roles where meeting deadlines and juggling multiple tasks are common. Thank you for sharing how your experience at Menards has contributed to your professional development.

End of transcript

At the top left of my web-portfolio is an “i” icon. Users can get my linkedin, github, and resume there.