

# Taha Afzal

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## WORK EXPERIENCE

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- Software Engineer II, CNH** Dec 2024 – Present | Sioux Falls, SD
- Spearheading the development of Viper 4+'s embedded system software in an Agile environment, utilizing Qt and C++.
  - Debugging multi-threaded software using gdb-multiarch, analyzing system logs, and documenting code with Doxygen.
  - Improving release cycles by 20% by implementing and maintaining CI/CD pipelines, automating build, test, and release workflows.
- Software Engineer, CNH** May 2022 – Nov 2024 | Sioux Falls, SD
- Collaborated with the team to transition the Viper 4+ build system from qmake to CMake, reducing build times by 25%.
  - Implemented features to create field boundaries, ensuring efficient chemical usage and preventing accidental sprays in waterways.
  - Enhanced a file conversion library, expanding support to JSON, CSV, and XML formats, ensuring 100% error-free conversions.
  - Mentored an intern in implementing the Delta-T quality measurement system to assess spray effectiveness based on weather conditions.
- Software Engineer Intern, Raven Industries, Inc.** Sep 2021 – May 2022 | Sioux Falls, SD
- Implemented on-device creation of geospatial vector data format shapefiles for the multiline feature in Raven Operating Software.
  - Developed this highly-requested feature for the Field Computer product line using Qt and C++ in an Agile environment.
  - Improved the multiline feature to make it more user-friendly and easier to discover enabling farmers to save 60% of their time.
- Software Engineer Intern, Raven Industries, Inc.** May 2021 – Aug 2021 | Sioux Falls, SD
- Collaborated in an Agile team of 8 to implement single sign-on for all 4 customer-facing apps for a secure user-authorization process.
  - Undertook displaying telemetry and generating alerts with Grafana to monitor load and throughput of critical services more closely.
  - Streamlined infrastructure with Terraform, reduced moving parts, refactored code, and improved documentation.
- Software Engineer Intern, Spidreye** Feb 2020 – Jun 2020 | New York, NY
- Developed, deployed, and tested a property-review website that gained 75+ users in the first month after launch in a team of 4.
  - Implemented Google Maps API to support location auto-completion when a user is searching for properties for faster results.
  - Utilized Firebase Authentication for user profiles and sending automated welcome emails through Mailchimp.

## SKILLS

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C++ | Python | Rust | Swift | JavaScript | SQL | Bash | ReactJS | Qt | QML | Terraform | AWS | Docker | Git | Java

## EDUCATION

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- BA Computer Science and Software Engineering, Augustana University** Aug 2018 – May 2022 | GPA: 3.76

### Honors and Awards

Global Leader Scholar, Slate Ronning International Scholar, Fred C. and J. Marie Christopherson Scholar, AURAFA Award Recipient

## PROJECTS

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- Uni Go, Founder and Developer** Oct 2023 – Present
- Leading the re-branded development of Ridesio to bring an affordable, and communal mode of transportation to college campuses.
  - Collaborating with 3 college campuses to integrate Uni Go, delivering a tailored solution that meets the unique needs of each college.
- Health Memo, Tech Lead** Oct 2020 – Nov 2020
- Led a team of 3 to develop an iOS app to help the elderly manage their chronic diseases and share regular updates with their doctor.
  - Utilized EMRs and Google's Text-to-Speech and Speech-to-Text to create a personalized experience for patients.
  - Won \$9,000 along with an invitation to work with engineers at Sanford Health for further research and development of the project.

## LEADERSHIP AND AFFILIATIONS

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- Augustana University, Trustee** Dec 2024 – Present
- Serving as a trustee on the Board of Trustees at Augustana, focusing on the well-being of faculty, students, and staff.
  - Strengthening the Computer Science program, advancing international education, and driving entrepreneurial initiatives on campus.
- UnderdogDevs, Mentor** Dec 2023 – Present
- Serving as a mentor to aspiring developers who are either formerly incarcerated or from an economically disadvantaged background.
  - Conducting weekly meetings with mentees to offer coding practice, interview preparation, resume analysis, and encouragement.