

# Nicholas Erickson

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## EDUCATION

Iowa State University

Ames, Iowa

*Bachelor of Science in Software Engineering*

Aug. 2021 - May 2024

**GPA: 3.69**

Rock Valley College

Rockford, Illinois

*Dual Credit Program Earning 41 Credits*

Aug. 2019 - May 2021

**GPA: 3.93**

## TECHNICAL SKILLS

**Programming Languages:** Java, C#, JavaScript, HTML, CSS, TypeScript, Python

**Frameworks and Databases:** ASP.NET, SQL, Angular, NoSQL, MongoDB, Express.js

**Tools:** Git, AWS (Lambda, S3), Postman, Microsoft SQL Server, Azure DevOps

## WORK EXPERIENCE

Software Engineer Intern

Ames, Iowa

*TMC Transportation*

May. 2022 - Present

- Developed an in-house web app that allowed the cybersecurity team to upload and track various security metrics.
- Web app was built into the existing TMS using the ASP.NET MVC Core stack and JavaScript.
- Created multiple AWS Lambda functions that gathered and stored security data using APIs and web scraping.
- Constructed an Azure Pipeline as well as used Terraform to automatically build and deploy Lambdas to AWS.
- Designed our SQL database schema and guided data analyst teammates how to query the database from Power BI.
- Collaborated in a team of 5 interns using Agile methodology on an Azure DevOps Board.

## PROJECTS

Maze It

- Desktop application that scans in hand-drawn mazes through a live camera and displays the solutions on screen.
- Developed maze processing and GUI with Python and Tkinter and programmed ESP-32 microcontroller in C.
- Broadcasted ESP-32 live camera feed to a webpage and grabbed the stream of still images from it using Python.
- Parsed individual maze blocks and stored respective values (empty or filled) into a graph data structure.
- Ran Dijkstra's pathfinding algorithm against the maze graph and output the virtual solution of the maze to the user.

Vocal Galactic

- Space game developed with Java that utilizes AssemblyAI API with Java & Node.js.
- Implemented ability to activate power ups in game by parsing speech to text input.
- Created GUI and graphics with the Swing library.
- Won best Space Hack at K-State Hackathon 2021 against 37 other teams.

To-Do List

- Engineered a to-do list web application with user profiles functionality using the MEAN tech stack.
- Utilized Angular to build out a basic to-do list app that could read and write from a local JSON file.
- Refactored data storage by creating a MongoDB schema and building a REST API backend with Express.
- Implemented user profiles and page authentication by storing cookies to the browser.

## ACTIVITIES

Computer Science and Software Engineering Club, Member

Aug. 2021 - Present