

# Glen A. Simon

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🌐 <https://github.com/gsimon2>

## EDUCATION

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### Michigan State University

*MS in Computer Science, GPA: 3.95*

**East Lansing, MI**

*January 2017 - December 2018*

### Michigan State University

*BS in Computer Engineering (cum laude), Dean's List, GPA: 3.87*

**East Lansing, MI**

*June 2014 - December 2016*

## EXPERIENCE

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### TechSmith

*Software Engineer 2 - Cloud Services Department*

**Okemos, MI**

*Jan 2019 - Current*

- Designed and developed single page applications, micro front-end components, and component libraries using packages including React, Redux, Axios, and Styled Components.
- Supported comprehensive unit testing using Jest and accessibility testing utilizing Pally and Puppeteer.
- Architected a pattern of leveraging lightweight ExpressJS servers to enable isolated development and testing of front end applications that were driven by external APIs.
- Maintained and extended controllers in dotnet applications including implementing new functionality or increasing ease of use by adding packages such as Swagger.
- Utilized tooling such as Azure Devops for CI/CD build and release pipelines and Azure Application Insights to monitor application health and usage.
- Created a VSCode Extension to house and share common snippets that are used across cloud repositories to enable quicker development of common components.

### Michigan State University

*Graduate Research Assistant - Software Engineering and Network Systems Lab*

**East Lansing, MI**

*Jan 2017 - Jan 2019*

- Developed the Evo-ROS framework that integrates evolutionary search capabilities with the Robot Operating System (ROS) and the Gazebo physics simulator.
- Integrated the ROS navigation stack as well as designed custom controllers to implement autonomous control of an unmanned ground vehicle (UGV) in simulation.
- Facilitated the build process of the MSU Autorally platform, which is a fully autonomous 1:5 scale UGV.

### Michigan State University

*Teaching Assistant - Computer Networks - CSE 422*

**East Lansing, MI**

*Sept 2016 - Dec 2016*

- Created teaching lab assignments for students to reinforce material learned in course lectures.
- Held weekly office hours to assist students with understanding course material.

## SELECTED PROJECTS

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### Create and Maintain Foundry VTT Modules

*Personal Project*

*Nov 2020 - Current*

- Developed and actively maintain open source, free to use modules that offer additional functionality to a popular virtual table top system, which combined have thousands of downloads.
- Regularly monitor community feedback: addressing bug reports, feature requests, and assisting with troubleshooting user issues.
- List of modules (hyperlinked):
  - Dramatic Rolls, PF2E Inspire Courage, Playlist Drag and Drop, Hide Play UI, Close Player Art

## Fitbit Fitness Tracker Custom Watch Face

*Personal Project*

*Aug 2018 - Sept 2018*

- Designed using the Fitbit Software Development Kit (SDK) to familiarize myself with JavaScript, CSS, and SVG.
- Developed a custom watch face application capable of being deployed across multiple fitness trackers with various aspect ratios and built-in features.
- Created custom functionality to push my understanding of the languages used and the Fitbit SDK framework.

## Population Mapping via WiFi Network Analysis

*Course Project - Advanced Computer Networks - MSU CSE 824*

*Sept 2017 - Dec 2017*

- Collaborated with two students to collect and analyze WiFi network usage in the MSU Engineering Building.
- Implemented algorithms to map user connection events to access points throughout the building to give visual representations foot traffic routes.
- Used aggregate data to map the population density of the building over time and make predictions of future density patterns.

## Cyber-Physical Shoulder Rehabilitation Platform

*Course Project - Senior Design - MSU ECE 480*

*Sept 2016 - Dec 2016*

- Cooperated with a team of students and two mechanical engineering firms to incorporate a screen onto a shoulder therapy machine to run a custom developed application that provided visual tutorials explaining how to correctly perform numerous exercises on the machine.
- Outfitted the shoulder therapy machine with a variety of sensors to monitor the user's performance during a therapy session and progress over multiple sessions.
- Designed and developed a database and website allowing workouts monitored on the machine to be uploaded, analyzed, and displayed to therapists. Therapists could then create a customized workout plan for each client, which would be displayed the next time the client logged into the shoulder therapy machine.

## PUBLICATIONS

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- M. A. Langford, G. A. Simon, P. K. McKinley, and B. H. C. Cheng, Applying Evolution and Novelty Search to Enhance the Resilience of Autonomous Systems, *IEEE/ACM 14th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*, Montreal, QC, Canada, May 2019.
- G. A. Simon, J. M. Moore, A. J. Clark and P. K. McKinley, Evo-ROS: Integrating Evolution and the Robot Operating System, *Proceedings of the Genetic and Evolutionary Computation Conference Companion*, pp. 1386-1393, Kyoto, Japan, July 2018.
- J. M. Moore, A. J. Clark, G. A. Simon and P. K. McKinley, Evo-ROS: Integrating Evolutionary Robotics and ROS (poster summary), *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, Vancouver, BC, Canada, September 2017.

## PRESENTATIONS

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- X-PLORE / Evo-ROS Update 2, PI meeting for AFRL Resilient and Trusted Systems Program, Ann Arbor, MI, September 2018.
- Evo-ROS: Integrating Evolution and the Robot Operating System, Genetic and Evolutionary Computation Conference, Kyoto, Japan, July 2018.
- X-PLORE / Evo-ROS Update 1, PI meeting for AFRL Resilient and Trusted Systems Program, Miami, FL, January 2018.
- Evo-ROS: Applying Evolution to the Robot Operating System (poster summary), International Conference on Intelligent Robots and Systems (IROS), Vancouver, BC, Canada. September 2017.
- Evo-ROS: Applying Evolution to the the Robot Operating System (poster summary), Michigan State University Bio/Computational Evolution in Action Consortium (BEACON) Congress, East Lansing, MI. August 2017.
- X-PLORE / Evo-ROS, PI meeting for AFRL Resilient and Trusted Systems Program, East Lansing, MI. July 2017.