

RAKIBUL HASSAN

✉ rhassan1@svsu.edu |  LinkedIn |  GitHub |  Portfolio | ☎ +1 (989) 493 9910

Work Experience

Student Research Assistant – Android

Mar 2023 – Present

Saginaw Valley State University (Mentored under Dr. Khandaker Abir Rahman)

Saginaw, MI

- Utilized research papers and analysis techniques to initiate and carry out research projects.
- Conducted extensive literature reviews on research topics related to Android and sensor data analysis.

Research Engineer Intern/Co-Op

Jun 2022 – Present

Magna International - Corporate R&D

Troy, MI

- Spearheaded a critical project to analyze image processing performance of vision-based accelerators by implementing various neural network models, which resulted in a significant improvement in accuracy and efficiency.
- Conducted thorough evaluations of various Systems on a Chip (SoCs) by performing comprehensive throughput analysis, and developed high-quality Hardware-In-Loop test software, which played a crucial role in identifying and fixing several critical issues.
- Project experience in deep learning model importing and verification, as well as contributing to the verification of image segmentation projects for embedded devices.

Desktop Support Analyst

Mar 2021 – Jun 2022

Covenant HealthCare - Information Technology

Saginaw, MI

- Achieved an exceptional satisfaction rating of 95% by providing top-notch tier-II support to over 500 onsite and remote end-users, resolving their tickets promptly, and ensuring seamless operations.
- Demonstrated a high level of technical expertise by performing basic system admin and network tasks, such as verifying network ports, which helped prevent downtime and disruptions.

Computer Science Tutor

Oct 2020 – Apr 2021

Saginaw Valley State University - Center for Academic Achievement

Saginaw, MI

- Leveraged excellent communication and interpersonal skills to assist students with homework, classroom activities, research, and specific academic criteria, resulting in improved academic performance and expedited learning.
- Collaborated with other tutors and faculty members to develop innovative teaching strategies and study materials, which proved highly effective in helping students grasp complex concepts.

Web Developer Student Intern

Oct 2019 – Dec 2021

Saginaw Valley State University - University Communications

Saginaw, MI

- Played a pivotal role in the redesign of several websites using content management systems and front-end web languages, which resulted in a more modern, user-friendly design and improved user experience.
- Led academic program website projects, collaborating with academic departments to ensure that the websites accurately reflected their unique offerings and branding. Successfully delivered high-quality websites that received positive feedback from users and stakeholders.

Projects & Competitions

CS Capstone Project - Foster Grandparents Management System | C#, .NET, MSTest

Jan 2023 – Present

- Conducted thorough testing and analysis of software requirements for a .NET desktop application using C#, resulting in 95% bug-free code and improved user experience.
- Coordinated with cross-functional teams to identify and resolve quality issues, ensuring successful delivery of the .NET desktop application within the project timeline and budget constraints.

TutorHub Crowd-sourcing Application - Android | Java, Google Maps, MongoDB

November 2022

- Spearheaded the design and development of a user-friendly interface for TutorHub, a crowd-sourcing application for education, using Java programming language.
- Successfully integrated geolocation and mapping functionality into the app using Google Maps API, ensuring accurate location tracking of data submissions from users.
- Employed MongoDB database to efficiently store and retrieve user data, ensuring smooth app functionality.

NASA Robotic Mining Competition – Lunabotics 2022 | Python, ROS, TensorFlow

Oct 2021 – May 2022

- Led the development of software for enabling communication between robots and external devices using Python programming language, and facilitated seamless data transfer between robots and sensors/cameras.
- Utilized a range of optimization techniques including transfer learning and data augmentation to training a robust neural network model for object detection in the Lunabotics competition.

BitTorrent-like P2P Application | *Java, Socket Programming, Multi-threading* Oct 2021 – Dec 2021

- Implemented a robust BitTorrent-like P2P application using Java socket programming and multi-threading, allowing for efficient handling of multiple connections and file transfers simultaneously.
- Designed and tested the application using unit and integration testing, ensuring maximum reliability and performance.

Trinity Fire Fighting Robot Competition 2019 | *C++, OpenCV* Mar 2019 – July 2019

- Worked collaboratively with team members to integrate sensor and camera data into the algorithms, optimizing the robot's performance and ensuring successful completion of the competition.
- Demonstrated excellent problem-solving and critical thinking skills, resulting in the successful design and implementation of the fire fighting robot algorithm.

Activities & Involvements

Workshop Lead | *Google Developers Student Club @SVSU* July 2022 – Present

- Developed and executed strategic marketing plans to promote our club and its events across multiple social media platforms, resulting in a significant increase in attendance and engagement.
- Collaborated with a diverse team of students to organize and execute a range of successful events, including coding workshops, hackathons, and tech talks, that fostered a sense of community and skill-building among our members.

Core Board Member / Treasurer | *Machine Learning Club @SVSU* Apr 2022 – Present

- Conducted thorough research and analysis of machine learning techniques and trends to identify opportunities for future projects and initiatives, ensuring that our club stays at the forefront of the field.
- Developed and managed our club's budget, ensuring that all financial transactions were accurately recorded and reported in compliance with university policies and procedures.

Senior Member | *Cardinal Robotics Team @SVSU* Jun 2019 – Present

- Led the development and implementation of our team's communication strategy, ensuring that all team members were informed and engaged throughout the project lifecycle.
- Collaborated with a team of four students to develop Python modules and functions of robot movement control for the 2019 Trinity Fire Fighting Robot Competition.

Member | *Association for Computing Machinery (ACM) @SVSU* Feb 2019 – Present

- Attended weekly meetings and collaborated with a team of fellow computer science students to compete in programming competitions, honing skills in algorithm design and implementation.

Education

Saginaw Valley State University University Center, MI, United States
B.Sc. in Computer Science, CGPA – 3.35/4.00 Anticipated Graduation – December 2023

Topics of Interest

Full-Stack Development, Web Development, Machine Learning, System on Chip, Algorithms & Data Structures

Awards

First Year Writing Award (1st Place), Dean's List, Red & White Academic Scholarship, Mridha Leadership Scholarship

Skills

Languages: C/C++, Python, Java, JavaScript, HTML/CSS, PHP

Database Management System: SQLite, MySQL, Microsoft-SQL, MongoDB

Frameworks: React, TensorFlow, Pandas, NumPy, Bootstrap

Developer Tools: Git, GCC/GDB, Vim, Shell Scripting, Docker, Anaconda, Android Studio, Junit

Operating Systems: Linux, Windows, MacOS

Boards: TI Jacinto 7, Raspberry Pi, Arduino Uno/Mega