# Manish Raj Osti

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LINKS www.mrosti.com, Github, mrosti@svsu.edu **PROFILE** Michigan-based Computer Science student with a background in Machine Learning and Software Development. **EXPERIENCES** Hemlock Jan 2022 — Present Analytics Analyst/ ML Engineer, Hemlock Semiconductor · Worked on the Foreign Object Detection project based on Retina-Net to detect impurities to maintain the purity of the poly-silicon Worked on Discrete Process Modeling which represents the process from reactors to finishing • Build the Statistical Process Control for cost variation and mass balance of process orders Worked on Nano-particles detection using Efficient-net(Pre-trained model) for the next-gen silicon battery research program · Worked on the Schedule visual which displays the current and next employee in the shift for different buildings on the plant. Aug 2020 — Present Research Assistant, Saginaw Valley State University • Federated Machine Learning/Split Learning: 1. Studied the research gaps in distributed machine learning and split learning, and it is a work in progress with the faculty professor. • CSI and Deep Learning: 1. Student Grant funded Research worked on a research paper with a faculty Professor on the estimation of Channel State Information 2. Designed, developed, and modified AI models alongside teams of researchers to implement and predict the CSI estimation. • Tweet-Classification with NLP: 1. Performed research and gathered around 1 million tweets from Twitter to begin assignments and worked on optimization techniques. 2. Worked on a research paper with a team of 3 including 2 Professors on Text Classification using Deep Learning models and got an accuracy of 92.45% • Gesture prediction using CSI and Deep Learning: 1. Successfully collected and did an analysis of Channel State Information data from android phones. 2. Implementing the neural network to classify and predict the gesture. Particle Swarm Optimization: 1. Implementation of the PSO for feature selection along with Support Vector Classifier. PSO was imported from NiaPy package. • Anti-spoofing for Single-Antenna Devices using Rotational CSI: 1. Successfully collected and did an analysis of Channel State Information data from motorized routers Aug 2021 — Dec 2021 Bay City Software Engineer: Co-op, Halla Mechantronics · Tested, maintained and recommended software improvements to ensure strong functionality and optimization Successfully maintained the automated CI/CD pipelines for code deployment using Jenkins

#### **PROJECTS**

#### Nov 2021 — May 2022

#### NASA rover Computer Vision Lead

- · Successfully collected images data and labeled it accordingly
- Used SSD Mobile-Net to train with our custom datasets
- Used and successfully implemented SLAM and Extended Kalman filter for the navigation system of the
  rover.

Aug	2022	- May	2023
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## Senior Capstone Project

- Worked on Software Requirements Specification with a team of 5 students for the project
- $\bullet$   $\,$  Tested and reviewed the code written by the developers of our capstone team as a Quality Analyst.

## EDUCATION

#### Bachelor's in Computer Science, Saginaw Valley State University

Saginaw

Minor: Applied Mathematics

Anticipated 2023 May

Aug 2018 — Jun 2019

Associate's in Science in Computer Science, Oakland Community

Royal Oak

College

#### ACTIVITIES

#### Aug 2022 — Present

## Lead/President: Google Developers Student Club

- · Grow student knowledge on developer products and platforms through hands-on workshops and events.
- Identify local partners to work with and lead project building activities.

#### Aug 2022 — Present

#### Vice-President: Machine Learning Club

- Hosted Machine Learning Competition at Saginaw Valley State University
- Provided the presentations and practical sessions on neural networks foundations

TECHNICAL SKILLS

Tensorflow/Keras

C++

Pytorch

C#/VB.Net

Python

Node.js

JavaScript

SQL/NO-SQL

Java

HTML5/CSS/BootStrap

SOFT SKILLS

Teamwork

Time

Communication

Management

Problem Solving

Flexibility