

SAHIL MODI

203 S. Sixth Street | Champaign, IL 61820 | Room 102
smodi9@illinois.edu | (847) 890-3506

EDUCATION

University of Illinois at Urbana-Champaign
College of Engineering: **Computer Science**
CS 225 (Data Structures) | James Scholar Honors

May 2021
GPA | 4.00/4.00

PROFESSIONAL EXPERIENCE

Distributed Autonomous Systems Laboratory, Undergraduate Research Assistant

Aug 2018 – Present

- Collaborated on a fully-autonomous robotic solution to phenotype a plot of crops
- Developed tests that simulate real-time performance in the field
- Developing **vision** algorithms to detect plant characteristics

Jan 2018 – May 2018
Urbana, IL

Swarm Robotix, Software Engineering Intern

May 2018 – Aug 2018

- Designed software architecture for an **autonomous swarm** of MACJAC robots
- Wrote **vision** algorithms with **OpenCV** that detected and tracked corner castings
- Researched **Convolutional Neural Networks** to improve vision accuracy
- Implemented **SLAM** with **A*** path planning for real-time navigation in the environment

Naperville, IL

Knowles Electronics, Software Engineering Intern

June 2016

- Fully built and configured a Linux cluster to be used as a database
- Tested microcontrollers against rated specifications with an oscilloscope
- Researched IC chips to be implemented in microphone testing PCBs

Itasca, IL

PROJECT HIGHLIGHTS

ADA Sidewalk Compliance Software | Software Developer

Software that detects and analyses sidewalk panels

- Mask RCNN used to isolate sidewalk panels in image
- Developing faster segmentation techniques
- Developing point cloud analysis to detect vertical faults

FaceTunes | Lead Developer

An app that plays a song based on current mood

- Machine learning detects emotions in an image
- Strongest emotion picked to play a song
- Spotify integration with specific mood playlists

LEADERSHIP AND ACTIVITIES

ACM SIGBot | 2017 – Present

Software Team

- Used ROS with vision to recognize game objects
- Researched KCF and other tracking algorithms

iRobotics MRDC | 2017 – 2018

Subsystem Lead, Software Team

- Designed and built the robot's intake system
- Developed code to control various subsystems

Engineering Freshmen Council | 2017 – 2018

IT Chair, 2017 – Present

- Redesigned the EFC main website

SKILLS

Proficient C++, Python, Java, ROS, Android Development
Intermediate OpenCV, CAD (Autodesk, SolidWorks)
Beginner Convolutional Neural Networks



Play Store: smApps



github.com/sahilmodi



linkedin.com/in/sahil-modi



sahilmodi.me