

SAHIL MODI

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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

Swarm Robotix, Software Engineering Intern

May 2018 – Aug 2018

Naperville, IL

- 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

Distributed Autonomous Systems Laboratory, Undergraduate Research Assistant

Jan 2018 – May 2018

Urbana, IL

- Collaborated on a fully-autonomous robotic solution to phenotype a plot of crops
- Developed tests that simulate real-time performance in the field

Knowles Electronics, Software Engineering Intern

June 2016

Itasca, IL

- 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

PROJECT HIGHLIGHTS

Capstone CS Project: 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

Capstone Project: Bluetooth Light Switch | Team Lead

An Internet of Things solution to wireless lighting

- Facilitated communication and delegated tasks
- Installable without removal of the current fixture
- Used an Arduino, Bluetooth 2.0, and 9g servo motor

LEADERSHIP AND ACTIVITIES

iRobotics MRDC | 2017 – Present

Subsystem Lead, Software Team

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

Engineering Freshmen Council | 2017 – Present

IT Chair, 2017 – Present

- Redesigned the EFC main website

ACM SIGBot | 2017 – Present

Software Team

- Used Robot Operating System to recognize objects

St. Alexius Medical Center | 2017

Volunteer, March – August 2017

- 80+ service hours
- Delivered medication from the pharmacy

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