SAHIL MODI

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

EDUCATION

University of Illinois at Urbana-Champaign — **May 2021**
College of Engineering: **Computer Science** — GPA | 4.00/4.00
Courses: Discrete Math, Linear Algebra, Data Structures, Computer Architecture — James Scholar Honors

PROFESSIONAL EXPERIENCE

Distributed Autonomous Systems Laboratory, *Undergraduate Research Assistant* — **Jan 2018 – Present**, Urbana, IL

- Improving a fully-autonomous robotic system that phenotypes a plot of crops (TerraSentia)
- Writing scripts to automatically update individual robots to the latest software
- Currently designing **localization** algorithms to accurately establish the robot's position

Swarm Robotix, *Software Engineering Intern* — **May 2018 – Aug 2018**, Naperville, IL

- Worked in a **team** of 5 people to design software architecture for an **autonomous swarm** of robots
- **Collaborated** with 2 people to develop **vision** algorithms with **OpenCV** that detected corner castings
- Researched **Convolutional Neural Networks** to improve vision accuracy
- Implemented **SLAM** with **A*** path planning for real-time navigation in the environment

Knowles Electronics, *Software Engineering Intern* — **June 2016**, Itasca, IL

- 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

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

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 DEVELOPMENT

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