

SAHIL MODI

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EDUCATION

University of Illinois at Urbana-Champaign

College of Engineering: **Computer Science**

Courses: Discrete Math, Linear Algebra, Data Structures, Computer Architecture

May 2021

GPA | 4.00/4.00

James Scholar Honors

PROFESSIONAL EXPERIENCE

Distributed Autonomous Systems Laboratory, Undergraduate Research Assistant

Jan 2018 – Present

- 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 retraining a **CNN** accurately classify the heading of wheat with 90% accuracy

Urbana, IL

Swarm Robotix, Software Engineering Intern

May 2018 – Aug 2018

- 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

Naperville, IL

Knowles Electronics, Software Engineering Intern

June 2016

- 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

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