SAHIL MODI

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EDUCATION

University of Illinois at Urbana-Champaign   **May 2021**
College of Engineering: **Computer Science**   GPA | 4.00/4.00
CS 225 (Data Structures) | James Scholar Honors

PROFESSIONAL EXPERIENCE

Swarm Robotix, *Software Engineering Intern*   **May 2018 – Aug 2018**
- Designed software architecture for an **autonomous swarm** of MACJAC robots   Naperville, IL
- 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**
- Collaborated on a fully-autonomous robotic solution to phenotype a plot of crops   Urbana, IL
- Developed tests that simulate real-time performance in the field

Knowles Electronics, *Software Engineering Intern*   **June 2016**
- Fully built and configured a Linux cluster to be used as a database   Itasca, IL
- 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
- Created and managed individual committee pages

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++, Java, Python, ROS, Android Development
Intermediate | OpenCV, CAD (Autodesk, SolidWorks)

Play Store: smApps   github.com/sahilmodi   linkedin.com/in/sahil-modi   sahilmodi.me