SAHIL MODI

✉ smodi9@illinois.edu ☎ (847) 890-3506 ⚲ 56 Petrie Circle, Streamwood IL 🖥 sahilmodi.me 💼 sahil-modi ⚹ sahilmodi

EDUCATION

B.S. Computer Science, Minor in Statistics

University of Illinois Urbana-Champaign

📅 May 2021   📖 GPA: 3.98/4.00

EXPERIENCE

EarthSense

Computer Vision Intern

📅 Sep 2018 – May 2019, Aug 2019 – Present   ⚲ Champaign, IL

- Researched computer vision & machine learning algorithms to recognize key plant traits through an autonomous robot platform.
- Trained a Convolutional Neural Network on a 90-10 split dataset that classifies the lodging of wheat with 80% accuracy.
- Deployed a TensorFlow ML model to detect and count plant stems with 96% accuracy.
- Proposed additional data collection metrics to address overfitting.

Northrop Grumman

Software Engineering Intern

📅 May 2019 – Aug 2019   ⚲ Rolling Meadows, IL

- Designed and developed a C# application to configure and test missile warning and deterrence algorithms. Pulled in development schedule by 2 months.
- Implemented an algorithm to determine orientation from a set of points with singular value decomposition.

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.
- Applied known SLAM algorithms with A* path planning on a TurtleBot for real-time navigation in the environment.

DASLab

Undergraduate Research Assistant

📅 Jan 2018 – May 2018   ⚲ Urbana, IL

- Wrote scripts to automatically update individual robots to the latest software.
- Created a user-facing configuration page on Android that sets the data mode of the robot.

COURSES

- Data Structures, Algorithms, Reinforcement Learning, Computational Photography
- Calculus, Linear Algebra, Discrete Math

PROJECTS

HackIllinois Stock Analysis

- A python package that determines sentiment about a company from its tweets using NLTK.
- Correlates tweets to stock price and predicts future stock price.
- Linear, ridge regression, and a CNN are used for prediction and compared against each other.

CU-Recycle

- Developed a Android application to determine if an item is recyclable in the Urbana-Champaign area.
- The application contained a neural network that was trained with Keras and TensorFlow Lite.
- The major challenges were different lighting, object variety, and recyclability.

LEADERSHIP

Engineering Freshmen Council

📅 2017 – 2018   👤 IT Chair

- Redesigned the EFC main website.
- Helped coordinate Freshmen-Week events.

iRobotics MRDC

📅 2017 – 2018   👤 Software Lead

- Fully designed the robot's intake system in CAD.
- Developed and implemented the robot's codebase for communication and control.

HONORS & ACHIEVEMENTS

- 2nd place at the Clorox design competition
- CU-Recyle won 2nd place at a Research Park Hackathon (PygHacks)
- James Scholar academic honors
- Tau Beta Pi engineering honors society member

SKILLS

C++, Python, C#, Java   ●●●●●

OpenCV, Keras   ●●●●○

TensorFlow   ●●●○○