

Sameer Iyengar

siyengar.dev | linkedin.com/in/sameer-iyengar | sameer.m.iyengar@gmail.com | 669-265-9559 | Livermore, CA

EDUCATION

Bachelor of Science, Systems Engineering and Design with focus in Robotics and Autonomous Systems, Minor in Art & Design

Aug 2022 - Dec 2026

University of Illinois at Urbana-Champaign, Champaign, IL

Relevant Coursework: Intro to Electronics, Calculus I-III, Intro Differential Equations, Physics: Mechanics, Physics: Electricity & Magnetism, Mechanics: Statics, Mechanics: Dynamics, Mechanics: Intro to Solid Mechanics, Design of Structures & Mechanisms

EXPERIENCE

AUVSL, University of Illinois at Urbana-Champaign Champaign, IL Undergraduate Research Assistant (Independent Study)

Aug 2023 - Present

- Assisted researchers at AUVSL (Autonomous and Unmanned Vehicle Systems Lab) with creating a sensor fusion algorithm in ROS2 for path planning and localization (SLAM) on an offroad vehicle by combining LiDAR and stereo camera data inputs.
- Developed a mathematical model for autonomous terrain-dependent tire inflation and deflation algorithms for a skid-steer vehicle using the Pacejka tire model (Magic Formula) with MATLAB and Simulink.

Monolithic Systems Lab, University of Illinois at Urbana-Champaign Champaign, IL Undergraduate Research Assistant

Jun 2023 - Dec 2023

- Worked on the RobInHighTs (Robots In High Tunnels) project with the Center for Digital Agriculture at the Monolithic Systems Lab, under the direction of Dr. Girish Krishnan.
- Developed the Valens on Wheels platform, an autonomous robotic manipulator with a soft arm end effector on an autonomous mobile base. Skills used include ROS1 (Python and C++), circuit design (EAGLE), and circuit assembly.

Small Grains, University of Illinois at Urbana-Champaign Champaign, IL Research Intern

Aug 2022 - May 2023

- Assisted professors of the Agricultural, Consumer, and Environmental Sciences (ACES) College with research to accelerate overall efficiency of the crop breeding process.
- Bred and treated variants of wheat and oats to show increased yield.

Gardeneur San Jose, CA Engineering Intern

May 2021 - Aug 2022

- Designed and released the GrowBin, a Wi-Fi capable, Arduino-based hydroponics tray that sustains plants.
- Developed a frontend interface with React Mobile which uses Amazon SageMaker to identify plant species, based off of user-uploaded images.

SKILLS

Programming Languages & Software

- C++, Python, R, ROS1, ROS2, MATLAB, Simulink, Docker, Git
- Express.js, Node.js, React, Angular, MongoDB, Ruby, Ruby on Rails

Robotics

- Design, assembly, and testing of autonomous and embedded hardware systems.
- Experience with Arduino, Raspberry Pi, sensors and controls.

Design & Fabrication

- Blender, Fusion 360, Autodesk EAGLE, PCBWay
- 3D Printing with PLA, PETG, TPU

AWARDS

IEOM 2nd Place International High School STEM Competition 2021

Industrial Eng. & Op. Management Society

Internationally recognized for a research paper on our innovation, CROPTIMIZE, a robot with the goal of increasing crop yields by finding crops that can be planted on a given plot of land.

PRIDEHacks 2023 First Overall 2023

Major League Hacking

Recognized for my team's web application, PRIDEline, a search engine which indexes book databases for literature with LGBTQ+ themes and authors. Built using the MERN (MongoDB, Express.js, React, Node.js) stack.