# Dhruv Sanagaram

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## EDUCATION

**University of Illinois, Urbana-Champaign| Urbana, IL** Expected Graduation May 2024

*B.S. - Computer Engineering* *Cumulative GPA: 0.00*

**Coursework**: Data Structures, Computer Systems and Programming, Introduction to Computing, Python Programming, Introduction to Electronics, Linear Algebra w/ Computational Applications, Discrete Structures

## SKILLS & TECHNICAL TOOLS

**Languages:** Java, Python, JavaScript, HTML/CSS, SQL, C, x86 Assembly

**Technologies:** React.js, PyTorch, Node.js, Express.js, Redux, PostgreSQL, Heroku, jQuery, Bootstrap, MEEP, Arduino, SenseHat, Matplotlib, Lumerical, Git, Jupyter Notebooks

## EXPERIENCE

**Student Researcher | UC Berkeley Integrated Systems Group** *June 2020 - Aug 2020*

- Performed data-driven analyses that informs production of silicon photonic integrated circuits
- Wrote Python scripts using MEEP API and Lumerical that generate simulations visualizing light propagation in fiber-optic cables of various materials and structures
- Summarized simulation findings using Matplotlib and presented to UC Berkeley Professor and research team

**Treasurer | Institute of Electrical and Electronics Engineers** *Oct 2021 - Present*

- Planned software and hardware workshops, as well as recruiting events for University of Illinois students
- Raised $8000 and increased average member involvement by 25 members per event

## PROJECTS

**FilmOasis** | *React.js, jQuery, Bootstrap*

- Programmed website that offers monthly updates on latest movies and film-community discourse

**AlgebraDash** | *AWG, Swing*

- Designed and programmed computer game where user evaluates logarithmic expressions in exchange for points. The points can be used to purchase power-ups in a car-racing game against the CPU

**Virtual Self-Driving Car** | *PyTorch*

- Programmed virtual car to use Deep Learning and Markov Decision Processes to navigate through obstacles that users can draw

**IEEE Hackathon** | *Arduino, Raspberry Pi*

- Coordinated hackathon challenging 40 members to design, prototype, build, and program a hardware project of their interest.
- Raised $5000 to purchase Arduinos, Raspberry Pi Picos, IEEE Custom PCBs, and other electrical parts
- Organized Soldering, Arduino, Raspberry Pi, and Prototyping workshops