

# Abhay Harpalani

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## EDUCATION

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### University of Illinois Urbana-Champaign

*Bachelor of Science in Computer Engineering*

*James Scholar - University Honors Program*

Urbana, IL

*Class of 2027*

GPA: 4.0

## EXPERIENCE

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### Graphic Designer

*UIUC OpenLab Makerspace*

October 2023 – Present

*Urbana, IL*

- Part-time job at the OpenLab, a student-run makerspace at UIUC
- Collaborated with OpenLab leadership to redesign brand language
- Used Adobe Creative Suite to create new advertising posters, electronic billboards, and website designs

### Automation Intern

*Lawrence Berkeley National Laboratory*

June 2022 - Feb. 2023

*Berkeley, CA*

- Developed automation for Google Apps and Smartsheet to streamline onboarding and project updates for client organizations
- Used the Google API in Python and JavaScript to send onboarding summary emails to project managers and update project databases

### Project Manager

*Eagle Scout Project*

Aug. 2019 – Jan. 2022

*Fremont, CA*

- Led the design, approval, and construction of an arbor and a planter for the Quarry Lakes Demonstration Garden in Fremont, CA
- Supervised 15 scouts and adults to coordinate material delivery, unloading, and construction efforts
- Recognized by Fremont Parks and Recreation leadership for contributions
- Successfully achieved rank of Eagle Scout

### Student Researcher

*Aspiring Scholars Directed Research Program*

May 2020 – Sept. 2020

*Fremont, CA*

- Worked in a team of 6 to translate the Voynich Manuscript, a codex written in an unknown language
- Analyzed text by comparing it to Latin-based languages
- Published research paper in the ASDRP Communications Journal

## PROJECTS

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### Arduino Drone | C++, Arduino, Embedded Systems Programming

Sept. 2023 – Present

- Using C++ to code an Arduino-based quadcopter
- Wrote code to integrate sensors such as accelerometers and gyroscopes into the drone's hardware
- Implemented PID control algorithms to error-correct altitude, pitch, roll, and yaw
- Wrote documentation throughout the process and used Github for version control

### Analog Synthesizer | PCB and Circuit Design, Analog Electronics, Python

Oct. 2022 – June 2023

- Designed, tested, and built an analog synthesizer which takes input from a digital keyboard
- Utilized concepts in analog signal processing, circuit design, and Raspberry Pi programming in Python

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, JavaScript, Java, HTML/CSS

**Developer Tools:** Git, VS Code, PyCharm

**Libraries:** Pandas, NumPy, Pillow

**Programs:** Fusion 360, Adobe Illustrator, Photoshop, Ghidra

**Clubs:** VEX Robotics, SIGPwny Cybersecurity Club, oSTEM

**Other:** CAD Design, Soldering, Graphic Design