# Abhay Harpalani

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## Education

**University of Illinois Urbana-Champaign** — Urbana, IL
*Bachelor of Science in Computer Engineering* — *Class of 2027*
*James Scholar - University Honors Program* — GPA: 4.0

**Irvington High School** — Fremont, CA
*Class of 2023*

## Technical Skills

**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

## Experience

**Graphic Designer** — October 2023 – Present
*UIUC OpenLab Makerspace* — *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** — June 2022 - Feb. 2023
*Lawrence Berkeley National Laboratory* — *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** — Aug. 2019 – Jan. 2022
*Eagle Scout Project* — *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** — May 2020 – Sept. 2020
*Aspiring Scholars Directed Research Program* — *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

**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