Hazel Levine

Curriculum vitae

✍ Available on request
☎ Available on request
✉ hazel@knightsofthelambdacalcul.us
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Experience

May 2020 – Present

BLÅHAJ CTF team

Capture-the-flag cybersecurity competitions

Capture-the-flag style cybersecurity competitions designed to train information security knowledge. Notably, Hack-a-Sat in May 2020, in which BLÅHAJ placed 10th and received invites to DEF-CON 28 Safe Mode with Networking. Generally specializes in miscallenous, theoretical challenges, or web challenges. See `https://blahaj.awoo.systems`.

September 2016 – March 2020

FRC Team 868: TechHOUNDS

Robot programming & environment administration

Development and deployment of programs to FIRST Robotics Competition robots using the National Instruments roboRIO control system and the WPILibJ library. Creation of tools for long-term team sustainability such as Discord bots or the TechHOUNDS Wiki. Maintenance of a Linux virtual machine housing the FRC development tools and environment.

August 2019 – April 2020

AP Capstone Research

Computer vision-based failure analysis of 3D printers

Development and testing of a computer-vision based means of preventing catastrophic FDM 3D printer failure. Real-time comparison of a currently in-fabrication part to the source model and cancellation of running prints given an error is detected. Source code available on Git.

July 2019

Purdue University Office of Future Engineers

Seminar for Engineering Prospects

Program for prospective Honors Engineering students at Purdue University. Involved development and documentation of various mechanical and electrical projects, including rudimentary autonomous robotic systems. Individuals were put in groups of four to work with throughout the week, documenting their results and designs all the while.

September 2018 – April 2019

Eli Lilly

Engineering Explorers Post

Program for discovering different disciplines of engineering. Involved creation of various small projects to demonstrate each individual discipline. Designed to help a student settle on a career path.

Education

2020 – Present **Indiana University**
Computer Science, freshman

2016 – 2020 **Carmel High School**
4.05 (W) grade point average

Public projects

2020 **perihelion (Git)**
A simple webring manager

2020 **lake (Git)**
A batch symbolic link/shortcut creator

2019 **Self-lace (Git)**
AVR-based self-tying shoe

2019 **Flick (FRC 868 GitHub)**
FRC 868's private Discord bot

2019 **Burnout's code (FRC 868 GitHub)**
A refactored, cleaner implementation of the code for FRC 868's 2019 Robot

2018 **Quickdraw's code (FRC 868 GitHub)**
*The code for FRC 868's **Einstein qualifying** 2018 robot, Quickdraw*

2017 **Ratchet's code (FRC 868 GitHub)**
The code for FRC 868's 2017 robot, Ratchet

2016 **wmrc (Git)**
A simple window manager comprised of nothing but POSIX shell scripts

2016 **urc (Git)**
A simple system initialization system for Unix-like systems

Software skills

High level **Java**, **C**, **shell**, **Linux**, git, LaTeX

Intermediate **Racket/Scheme**, **Python**, **Rust**, **JS/Node**, HTML/CSS, 3D printing, OpenBSD

Basic level **OCaml**, Windows, Haskell, C++, EAGLE, Autodesk Inventor

Communication skills

English Native language

Hebrew Written: fair – Oral: fair

Awards

2020 **9th place**
rgbCTF 2020, team BLAHAJ

2020 **5th place, 100% completion**
RACTF 2020, team BLAHAJ

2020 **10th place**
Hack-a-Sat CTF, team BLAHAJ

2019 **Commended**
National Merit Scholarship Corporation

2019 **AP Scholar With Distinction**
CollegeBoard

2019 **"Most Spirited Team"**
Purdue University: STEP

2019 **"Take the Initiative" Award**
FRC 868 End-of-year meeting

2019 **FRC 868: Winner**
Indiana District Championship

2019 **FRC 868: Winner**
Center Grove District Event

2018 **CLASS Award**
Presented by Sidney Swartzendruber

2018 **FRC 868: Winner**
FIRST Championship: Archimedes Division

2018 **FRC 868: Winner**
Indiana District Championship

2018 **FRC 868: Winner**
Tippecanoe District Event

2018 **FRC 868: Winner**
Plainfield District Event

2017 **FRC 868: Chairman's Award**
Tippecanoe District Event

University coursework

Fall 2020 **CSCI-H 211**
Introduction to Computer Science, Honors

Fall 2020 **ENG-W 131**
Reading, Writing, and Inquiry I

Fall 2020 **MATH-M 303**
Linear Algebra for Undergraduates

Fall 2020 **PHIL-P 141**
Introduction to Ethical Theories and Problems

Fall 2020 **SOC-S 100**
Introduction to Sociology

References

Zachary Bonewit **FRC 868 head coach**
zbonewit@ccs.k12.in.us

Alexander Ryker **FRC 868 Programming/Electrical mentor**
acryker@gmail.com

Allison Malloy **Carmel High School AP Capstone Research teacher**
amalloy@ccs.k12.in.us

David James **Carmel High School AP Physics 1/AP Physics C teacher**
djames@ccs.k12.in.us