

# ABHAY SINGH THAKUR

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## EDUCATION

### Purdue University

Aug 2019 – May 2023

*Bachelor of Science in Computer Science and Data Science*

*West Lafayette, IN*

Dean's List and Semester Honors (Fall 2019, Spring 2020, Fall 2020)

Concentration: Cybersecurity and Machine Intelligence

Relevant Coursework: Systems Programming, Object Oriented Programming, Data Structures & Algorithms, ML Models, Database Design

### Emirates Future International Academy

Apr 2013 – Apr 2019

*High School Diploma*

*Abu Dhabi, UAE*

## TECHNICAL SKILLS

**Languages:** C, C++, Java, Python, MATLAB, HTML, CSS, JavaScript, R, SQL, Shell Scripting (Bash), MongoDB

**Developer Tools:** GitHub, Vim, Jira, VS Code, Microsoft Office Suite, RStudio

**Frameworks & Technologies:** Pandas, Numpy, Scikit, AWS, Django, Bootstrap, Node.js, React.js, Terraform, Ansible

## EXPERIENCE

### Cyber Security Intern

Jun 2022 – Aug 2022

*Pacific Northwest National Lab (US Dept. of Energy)*

- Improved existing virtualization of network infrastructure and testbeds using Terraform and Ansible to minimize setup, deployment and testing times
- Contributed to research in critical infrastructure protection and network analysis

### Undergraduate Teaching Assistant

Aug 2021 – Dec 2021

*Purdue University*

*West Lafayette, IN*

- Graded homework assignments and developed course curriculum for the Freshman Tools course, CS 193
- Resolved student queries on the online teaching platform, Campuswire, and helped students with class assignments during weekly office hours

## PROJECTS

### Movie Magpie | *React, Material UI, Firebase*

Jul 2021 - Aug 2021

- Built a basic React app to give movie recommendations based on user-defined parameters such as movie genre, release dates, ratings and popularity, utilizing Material UI

### MyShell | *C++, Flex, Bison, Bash*

Mar 2021 - Apr 2021

- Employed functionality from common shells such as bash and csh to build a shell interpreter that uses Flex and Bison to implement the shell grammar

### Water-U-Doing? | *HTML, Django, Sass, Bootstrap*

Jan 2021

- Created a web-app at the BoilerMake VIII Hackathon to track users' water usage and generate a comparative report using Django and JS/CSS/HTML

### NASA International Space Apps Challenge 2020 | *Tensorflow, Tableau, Excel*

Sept 2020 - Oct 2020

- Tackled the 'Spot that Fire v3' challenge by creating a fire recognition system trained on the live fire dataset by NASA
- Designed a prototype app to notify dangerous fires nearby with an accuracy of 83% and presented a dashboard on Tableau to spread awareness of wildfires

### HelloWorld BikeFinder | *Android Studio, Maps SDK, Firebase*

Sept 2019

- Developed an Android app to help locate lost bikes on college campuses using location indexing with the help of Google Maps SDK

## ACTIVITIES AND ORGANIZATIONS

### Operations Head *Cricket and Social Outreach (CASO)*

Apr 2021 – Present

- Collaborating with other board members to plan and organize cricket tournaments and weekly social events

### Organizer, Web Dev Team *Purdue Hackers*

Aug 2021 – Mar 2022

- Planning and executing events such as seminars, workshops and information sessions for students while working with the Purdue Hackers Web Dev team

### Member *b01lers (Purdue Capture The Flag)*

Jan 2021 – Present

- Applying skills in web security, cryptography, and forensics to compete in computer security competitions where participants solve security-themed challenges for the purpose of obtaining the highest score