# 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 – Present**
*Pacific Northwest National Lab (US Dept. of Energy)*
- Improving existing virtualization of network infrastructure and testbeds using Terraform and Ansible to minimize setup, deployment and testing times
- Contributing 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