Abhinav Byreddy

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Education

Pennsylvania State University B.S. in Computer Science
GPA: 3.80 Expected Graduation: May 2026
Awards: Dean's List for 2 Semesters

Skills

Languages: Java, JavaScript Python, Bash, HTML/CSS
Frameworks: React, Next.js, Kubernetes, Node.js, Linux, OpenAPI/Swagger
Tools: NGINX, Docker, AWS/GCP, Project Management
Certifications: AWS Certified Cloud Practitioner
Relevant Coursework: Systems Design (C), Algorithms, Database Management

Work Experience

CTFGuide State College, PA
Software Engineer Oct 2022 – Present

- CTFGuide is a platform that provides web based cloud terminals, hundreds of practice problems, AI grading, and a full LMS system to help professors teach cybersecurity. The company has received over $200K in funding and over a thousand users.
- Built and monitors core backend terminal framework architecture to mirror fully functional Linux terminals in browser through HTTPS using **Kubernetes**, **Docker,** and **NGINX,** hosted on **Google Cloud Platform.**
- Achieved over a **60%** reduction in cloud platform costs through extensive optimization of performance and resource utilization.
- Created proprietary scripts using **Python** and **Bash** for logging terminal commands/UI events and streaming them to an AI microservice in real-time.
- Created web pages using the **React** and **Next.js** framework coded in **HTML/CSS** (Tailwind.css).
- Deployed microservice in the standardized in **OpenAPI** to handle terminal details & CRUD.
- Spearheads B2B/VC meetings in conjunction with university consultation to reach **5+** schools and **90+** professors.
- Oversees 8 employees and directs project timelines through frequent meetings and team gatherings.

Projects

Facial Recognition Door Lock Aug 2020

- Created an electronic industrial door lock unlocked by facial recognition.
- Used a **Raspberry Pi** to process visual information from a camera through an open-sourced library known as **OpenCV**.
- Sent affirmative and negative commands to the door lock with **Python** through a series of breadboards.

Automatic Drink Dispenser Nov 2018

- Created an automatic drink mixer controlled using a web-based application built on **Node.js** and used **Python** to control the motors. Software and hardware were handled using a **Raspberry Pi**

Activities

- HackPSU 2022
- VEX Robotics 2015- 2021
- First Lego League (FLL) 2011- 2014