

# Arnav Surve

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## EDUCATION

### California State University - Sacramento

*Bachelor of Science, Computer Science*

Sacramento, CA

Aug. 2024 – May 2026

### Purdue University

*Bachelor of Science, Cybersecurity – Dean's List, Fall 2023*

West Lafayette, IN

Aug. 2022 – May 2024

## SKILLS

**Languages:** Python, Java, C, SQL, Go, Bash,  $\text{\LaTeX}$ , Javascript, HTML/CSS

**Frameworks:** Agile, PostgreSQL, Svelte, Node.js, Express.js

**Tools:** Git, Vim, AWS (S3, EC2, Lambda), Bash, Docker, Jupyter Notebooks

**Libraries:** pandas, NumPy, Matplotlib, InfraPy, SciKit-Learn

## PROJECTS

### LastFM-crawl | *Python, Flask, AWS Lambda, Docker*

July 2024

- Developed a wrapper for the Last.fm API as a modular way to embed Last.fm stats in a website or application.
- Implemented API endpoints to serve JSON data (e.g. listening history, followers/following, and aggregated daily/monthly/yearly listening stats).
- Containerized using Docker and created a CI/CD pipeline with Zappa for seamless testing and deployment.
- Deployed to AWS Lambda for serverless endpoint access, mitigating ~\$15 in monthly costs compared to AWS EC2.

## RELEVANT COURSEWORK

CSC 20 - Programming Concepts and Methodology II

Java, OOP, Big-O

CSC 35 - Introduction to Computer Architecture

x86 Assembly, UNIX Shell

CNIT 27000 - Cybersecurity Fundamentals

Ubuntu, Wireshark, Nmap, SQL

CNIT 27100 - Cybersecurity Fundamentals II

AWS (IAM, EC2, S3)

## EXPERIENCE

### IT Infrastructure Intern

June 2024 – Aug. 2024

*MITER Brands – Milgard Manufacturing*

*Tacoma, WA*

- Conducted a granular analysis of IT server, application, and network monitoring landscape.
- Composed a proposal to optimize alerts flow for greater scalability and quicker incident resolution, reducing average inbox volumes by ~60%.
- Developed 5 Site24x7 monitors to track latency metrics for Infor Cloud REST API endpoints.
- Overhauled Site24x7 monitor and alert groups, escalation policies, and alert thresholds to mitigate tech debt and improve efficiency by ~20%.
- Automated compliance audits for Active Directory controlled accounts using PowerShell scripting.

### Undergraduate Researcher

May 2024 – Aug. 2024

*NASA California Space Grant Consortium*

*Sacramento, CA*

- Developed unsupervised classification models employing K-Means clustering and agglomerative clustering for volcanic activity prediction using infrasound frequencies, utilizing datasets from Boise State University Scholarworks with a maximum silhouette score of **0.47**.
- Constructed an infrasound sensor array and monitor using Amphenol Board Mount Sensors and Raspberry Pi.

### Backend Developer

Aug. 2022 – May 2023

*Purdue University Office of Engagement*

*West Lafayette, IN*

- Worked in a 10 person team using Agile methodology to develop a web application to enable research grant applications.
- Developed 7 REST API endpoints using Express.js to enable CRUD functionality.
- Implemented federated authentication using Purdue University Single Sign-On.
- Architected an ORM database to handle user PII and grant applications using PostgreSQL.
- Utilized Docker for containerization and ease in deployment of backend services.