# Arnav Surve

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## EDUCATION

**California State University - Sacramento** <span style="float:right">Sacramento, CA</span>

*Bachelor of Science, Computer Science* <span style="float:right">*Aug. 2024 – May 2026*</span>

CSC 20 - Java OOP, CSC 35 - Computer Architecture

**Purdue University** <span style="float:right">West Lafayette, IN</span>

*Bachelor of Science, Cybersecurity – Dean's List, Fall 2023* <span style="float:right">*Aug. 2022 – May 2024*</span>

CNIT 27000 & 27100 - Cybersecurity Fundamentals I & II, CNIT 24200 - System Administration

## EXPERIENCE

**IT Infrastructure Intern** <span style="float:right">June 2024 – Aug. 2024</span>

*MITER Brands – Milgard Manufacturing* <span style="float:right">*Tacoma, WA*</span>

- Analyzed IT server, application, and network monitoring landscape.
- Composed a proposal to optimize monitoring alerts flow for greater scalability and quicker incident resolution, reducing average inbox volumes by ∼**60%.**
- Developed 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** <span style="float:right">May 2024 – Aug. 2024</span>

*NASA California Space Grant Consortium* <span style="float:right">*Sacramento, CA*</span>

- 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** <span style="float:right">Aug. 2022 – May 2023</span>

*Purdue University Office of Engagement* <span style="float:right">*West Lafayette, IN*</span>

- Worked in a 10 person team using Agile, developing a full stack web app for research grant applications.
- Developed RESTful API endpoints using Express.js to enable CRUD functionality.
- Implemented federated authentication using Purdue University Single Sign-On.
- Architected a PostgreSQL database using Prisma ORM to handle user PII and grant applications.
- Utilized Docker for containerization and deployment of application on Purdue servers.

## PROJECTS

**taskman** | *Go, Gin, PostgreSQL, Docker* <span style="float:right">Aug. 2024 - Current</span>

- Independently developed a full stack CLI task management solution using Go and the Gin web framework, providing RESTful APIs for task and user management.
- Designed PostgreSQL database schemas, including user-specific tables with foreign key relationships.
- Implemented user session authentication and authorization using JWT, securing access to protected endpoints.
- Created robust error handling and validation mechanisms for API endpoints, enhancing reliability and UX.
- Automated build, testing, and deployment process using Makefile and containerized backend service with Docker.

**lastfm-crawl** | *Python, Flask, AWS Lambda, Docker* <span style="float:right">July 2024</span>

- Developed a wrapper for the Last.fm API as an easier 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 EC2.

## SKILLS

**Languages**: Python, Go, SQL, Bash, Java, LaTeX, Javascript, HTML/CSS
**Frameworks**: Flask, Gin, Svelte, Node.js, Agile
**Tools**: Git, Vim, Postman, AWS (S3, EC2, Lambda), Bash, Docker, Jupyter Notebooks
**Libraries**: pandas, NumPy, SciKit-Learn