Arnav Surve

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EDUCATION

California State University - Sacramento   Sacramento, CA
Bachelor of Science, Computer Science   *Aug. 2024 – May 2026*
CSC 20 - Java OOP, CSC 35 - Computer Architecture

Purdue University   West Lafayette, IN
(Incomplete) Bachelor of Science, Cybersecurity – Dean's List, Fall 2023   *Aug. 2022 – May 2024*
CNIT 27000 & 27100 - Cybersecurity Fundamentals I & II, CNIT 24200 - System Administration

EXPERIENCE

IT Infrastructure Intern   June 2024 – Aug. 2024
MITER Brands – Milgard Manufacturing   *Tacoma, WA*
- 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   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, 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*   Aug. 2024 - Current
- 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*   July 2024
- 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