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
Bachelor of Science, Cybersecurity – Dean's List, Fall 2023 — *Aug. 2022 – May 2024*
CNIT 27000 & 27100 - Cybersecurity Fundamentals I & II, CNIT 24200 - System Administration

Projects

taskman | *Go, PostgreSQL* — Aug 2024 - Current
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LastFM-crawl | *Python, Flask, AWS Lambda, Docker* — July 2024
- Developed a wrapper for the Last.fm API use as a modular way to embed Last.fm stats in my 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.

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 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.

Skills

Languages: Python, Java, C, SQL, Go, Bash, LaTeX, Javascript, HTML/CSS
Frameworks: Agile, PostgreSQL, Svelte, Node.js, Express.jss
Tools: Git, Vim, AWS (S3, EC2, Lambda), Bash, Docker, Jupyter Notebooks
Libraries: pandas, NumPy, Matplotlib, InfraPy, SciKit-Learn