

Aman Sahu

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Professional Summary

Innovative and results-driven Computer Science student with a strong foundation in software development and full-stack engineering. Skilled in leveraging advanced technologies, including Python, Flask, Swift, and AWS tools. Proven leadership experience managing teams and delivering technical solutions. Recognized for problem-solving expertise and a committed to continuous learning.

Skills

Languages: Python, SQL, C++, Swift, Firebase, Angular

Libraries: flask, transformers, sk-learn, Streamlit, matplotlib, Seaborn, JavaFX

Methodologies: SDLC, Agile, Waterfall

Tools: Git, Docker, Slack, ServiceNow, REST APIs, AWS (SageMaker, EC2, S3), Azure SQL Databases, GSuite, Office365

Education

Pennsylvania State University

Aug 2021 – Expected May 2025

B.S Computer Science

GPA: 3.36

Deans List: *Fall 2021, Spring 2022*

Related Coursework: Data Structures, Formal Languages, Operating Systems, Algorithms and Analysis, Applied Regression Analysis, Artificial Intelligence, Machine Learning

Work Experience

Software Engineer

ADDR LLC, Harrisburg, PA

Dec 2024 - Present

- A technology startup with a focus in developing innovative autonomous drone solutions for various real world challenges and use cases.
- Designing and maintenance of the company website. Used Three.js for the 3D model environment and JavaScript
- Conceptualization, collaboration, and development of prototype drone navigation algorithm for efficient safe operations in real world scenarios
- Researching object detection using the NVIDIA Jetson Nano development environment.

Operations Analyst

Penn State Housing and Food Services, Middletown, PA

Aug 2024 - Present

- Introduced **Git** Version Control System for codebase
- Analyzed and updated JSON data structure, JavaScript's to improve data management of Restaurant Inventory Management System
- Streamlined mass email communication for over 150 employees using Power Automate and API.
- Produced detailed technical documentation for backend processes for proper system maintainability.

IT Services Student Team Manager

Penn State IT Services, Middletown, PA

June 2022 - Present

- Effectively managed university technology infrastructure, ensuring systems are consistently updated and maintained
- Trained and managed student team of over 10, providing insight into daily team tasks and technical issue resolution.
- Assisted more than 250 students and faculty with technology issues employing intricate solutions
- Managed and created incidents using **ServiceNow** for streamlining communication and upkeep
- Deployed and verified 500+ university computers with custom Penn State OS image

Research Intern, MCREU

Penn State College of Engineering, State College, PA

April 2024 - July 2024

- Developed pipeline to deliver accurate conversational translations between doctors and patients
- Integrated Meta's SeamlessM4T-v2 **NLP** model into **Swift** iOS application
- Implemented NLP model using Python's **transformers** and containerized environment using **Docker**
- Produced custom API endpoints using **Gunicorn** with **Flask**, enhancing scalability and performance
- Deployed model on **AWS SageMaker** with **S3** storage and **EC2** for deployment
- Initiated early stages of iOS application deployment using **TestFlight** for beta testing and user feedback

Full Stack Developer Intern

Swan Softech Pvt Ltd, Raipur, India

April 2022 – Sept 2022

- Collaborated and improved file tracking efficiency by 17% using Python and Angular.
- Migrated 5,000+ rows to **SQL** with **PHPmyadmin**, boosting response time by 15%
- Demonstrated fluency in writing production-ready code, implementing **Object-Oriented Programming**
- Introduced proper versioning and modifications to **REST API**, improving response time by 20%
- Constructed **unit tests** of application, effectively resolving issues ensuring optimal performance

Projects

Rapha.AI

Python, transformers, sk-learn

- Collaborated and built fine-tuned *Vision Transformer* and *ResNet* models for improving disease and cancer detection in medical images
- Trained models on datasets such as MNIST and RSNA Pneumonia for accuracy.

SeamlessM4Tv2-API

Python, flask, Docker

Source Code

- Developed for iOS application facilitating interlanguage communication between doctors and patients
- Deployable custom API endpoints for generating text-to-speech and speech-to-speech translations

Desktop Financing App

Java, JavaFX, Python, Seaborn

Source Code

- Contributed to a **Java** accounting program as part of final year capstone project
- Showcasing collaborative software development skills and understanding of programming principles.

discbot-X

Node.js, Javascript

Source Code

- Designing and implementing a versatile Discord bot for enhancing user interaction within Discord servers.
- Built using discord.js library and current integration with Google Programmable Search Engine