JANHAVI PENDSE

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EDUCATION

North Carolina State University, Raleigh, NC   Expected May 2025

Master of Computer Science

Coursework : Design and Analysis of Algorithms, Software Engineering, Object-Oriented Design and
Development, Computer Networks, Software Security, Operating Systems, Internet Protocols

Savitribai Phule Pune University, Pune, India   August 2018 – May 2022

Bachelor of Engineering in Information Technology (Data Science Hons)   9.58 CGPA

Coursework : Database Management Systems, Machine Learning, Cloud Computing.

SKILLS

Languages : C, Python, C++, Ruby, HTML/CSS
Web Development and Databases : Django, Rails, Node.js, MySQL, MongoDB, Linux
Tools/Frameworks : Pytest, AWS, Rest APIs, SSH, Unix Shell
Software Engineering Tools : Git, Jira, Jenkins, Docker, Postman

WORK EXPERIENCE

Software Development Engineer in Test, Druva Data Solutions, Pune, India   July 2022 - May 2023

- Designed automation frameworks using **Pytest** to automate feature test cases that ensured the scalability and reliability of the product to handle petabytes of data.
- Implemented **multithreading** techniques for simultaneous testing of multiple scenarios. Created CI/CD pipelines by writing **Groovy** scripts which automated scheduled running of test cases in **Jenkins**.
- Solely managed testing, which included efficiently backing up data on **AWS Redshift** by triggering ETL pipelines using **AWS Glue**. Monitored and resolved errors by keeping track of logs in **Amazon Cloudwatch.** Gained experience with other AWS services such as **AWS S3, Amazon SNS and SQS, AWS ECS.**

Software Development Engineer in Test Intern, Druva Data Solutions, Pune, India   Jan 2022 - June 2022

- Created and maintained **test bed setups. Reported, tracked and updated** issues and test-cases.
- Deployed cloud applications using **Docker** containers.
- Gained hands-on experience with different OS for testing such as **Windows, MacOS** and Linux flavors like **Ubuntu, RHEL and CentOS.**

PROJECTS

HospitalHub - Web Development using Django

- A peer review and rating system encompassing all healthcare services. Users can sign up, discover, and read/write reviews of doctors and hospitals to make an informed choice.
- The web application utilizes **Django** and **Python** for backend development, integrates **HTML/CSS** and **JavaScript** for frontend design, and **MySQL** for database management.

WolfJobs - Web Application Development

- Application tracking system for on campus jobs consisting applicant and manager profiles. It has an end to end application tracking flow.
- The web application uses **Node.js** and **TypeScript** for the backend, **React** for the frontend, and **MongoDB** for data storage and management.

XINU - Operating System Development

- Implemented advanced process scheduling algorithms such as **Exponential Distribution Scheduler** and **Linux-like Scheduler** to mitigate process starvation.
- Designed virtual memory management system using **demand paging** method for Xinu OS, working directly with Intel x86 architecture. Implemented **backing store mechanism** to map large address spaces into limited physical memory. Constructed **multi-level page tables** and developed **interrupt handling** for page fault management. This allowed programs to use address spaces larger than physical RAM.
- Optimized system performance by creating **file system defragmenters**, ensuring sequential disk block allocation for file storage.