

Rajat Girish Chandak

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EDUCATION

North Carolina State University

Master of Computer Science, **GPA: 3.89/4.00**

Raleigh, NC

Aug 2023 – May 2025

Coursework: Design and Analysis of Algorithm, Linux Networking, Software Engineering, Efficient Deep Learning

Shri Ramdeobaba College of Engineering and Management

Bachelor of Engineering in Computer Science Engineering, **GPA: 8.68/10.00**

Nagpur, India

Aug 2018 – Jun 2022

Coursework: Data Structures and Algorithms, Database Management Systems, Distributed Systems, Object-Oriented Programming

TECHNICAL SKILLS

Languages/Databases: C++, C, Python, Java, SQL, MySQL, MongoDB (NoSQL), HTML, JavaScript, CSS

Frameworks/Libraries: Selenium, REST Assured, TestNG, React, Flask, JUnit, Ajax, Jenkins, jQuery, Pandas, Numpy

Developer Tools: AWS, TeamCity, Jira, Postman, Linux, Visual Studio, Git, Kubernetes, Docker, Ansible, Swagger

WORK EXPERIENCE

Research Developer, North Carolina State University

Apr 2024 – Present

- Developed Next.js frontend for an agricultural decision-making platform helping over 1000+ farmers make informed decisions
- Architected scalable backend using Nest.js and MongoDB, implementing MVC architecture and JWT auth for 10,000+ users
- Deployed on AWS (Amplify, S3, CloudFormation) for scalability and CI/CD, reducing deployment time by 50%
- Engineered ETL pipelines with Selenium and GitHub Actions, processing 100K+ data points for real-time agricultural insights

Software Developer, ZS Associates

Jan 2022 – Jul 2023

- Played a key role in the development of 3 machine learning and AWS-based products in ZS's Zaidyn Data & Analytics suite
- Developed a Java-based automation framework with Selenium, covering 200+ functionalities and reducing testing time by 25%
- Refactored 10,000+ lines of legacy code and integrated SonarQube, reducing critical code issues by 30%
- Implemented a dashboard for automation build results using Python, HTML, and JavaScript. Integrated with TeamCity for artifact hosting and Microsoft Teams for automated build notifications, boosting collaboration and transparency by 40%
- Created an AWS resource monitoring tool with Python, boto3, and SMTP, deployed on Lambda with API Gateway. Built a Flask API for on-demand queries and used CloudWatch for daily scans, saving around \$2,000 per week in AWS resource costs
- Conducted code reviews, mentored junior team members, and practiced Agile methodologies, improving team efficiency by 15%

Software Developer Intern, Vigilante Cyber Forces

Apr 2021 – May 2021

- Developed a C++-driven audit tool utilizing WMI scripts and registry access to analyze OS configurations and network settings
- Engineered multithreaded algorithm to scan file directories, detecting unnecessary files and optimizing audit speed by 60%
- Developed automated checks for antivirus, firewall, browser history, and password policies, generating extensive audit reports

PROJECTS

Scalable CDN as a Service (CDNaaS) and Infrastructure as a Service (IaaS) on Linux Environment [Link](#)

- Led creation of scalable multi-tenant IaaS platform, simulating cloud service for 100+ users with tailored VPCs, subnets, and VMs using Linux virtualization and Docker containers and used Linux routing tables to set up connection between different components
- Developed a comprehensive CDNaaS solution with **Flask-based API** endpoints, enabling tenants to deploy and manage edge server VMs that execute custom scripts for advanced content management and delivery
- Orchestrated **Smart DNS** server with **Google Maps API** for edge server routing, implemented round-robin algorithm for load balancing, and simulated CDN functionality and fault tolerance via a smart browser script
- Devised a high-performance automation framework with **Ansible** and Python for the South-Bound service, which streamlined the deployment of user-requested infrastructure, ensuring rapid provisioning and reliability

Full-Stack Development: Open-Source AI-based JobTracker Application [Link](#)

- Developed a job-tracking platform using Flask, MongoDB, React, and OpenAI API, boosting user job search efficiency by 50%
- Implemented Selenium web scraping, aggregating 1000+ job postings daily from 5 major job sites based on keywords
- Achieved **80%** code coverage with Pytest unit tests, integrated Codecov and Pylint, and executed GitHub Actions for **CI/CD**

Microservices Architecture: Scalable Video-to-MP3 Conversion

- Developed Flask-based API Gateway with JWT auth and 5+ RESTful microservices, reducing latency by 30%
- Utilized MiniKube for local development and Dockerized the application for Kubernetes clusters increasing scalability by 50%
- Integrated MongoDB, RabbitMQ, and SMTP with JSON communication, achieving 99.9% uptime and Swagger-documented APIs

ACHIEVEMENTS

- Secured a **Top 10** Finalist position in 'Startup India Competition 2019' among 500+ teams by Govt. of Maharashtra
- Published research paper on **Challenges and Innovations in Cyber Security** in an international journal