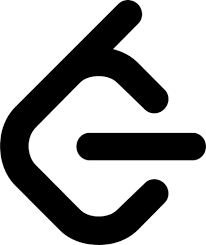
Deep Debnath

DevOps Engineer

Mumbai, India

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# SUMMARY

# DevOps Engineer with over 3 years of experience specializing in DevOps Practices and Cloud Management. Proficient in leveraging AWS services to architect, deploy, and maintain scalable, resilient, and secure cloud environments. Expert in utilizing Terraform, Kubernetes, Ansible, and Jenkins for Infrastructure as Code (IaC) and Continuous Integration/Continuous Delivery (CI/CD) pipelines. Skilled in container orchestration using Kubernetes and managing container images with Docker. Deep understanding of security best practices, including Identity and Access Management (IAM), Secrets Management, and Encryption using Key Management System (KMS). Strong problem-solving and troubleshooting skills, with a focus on optimizing performance, availability, scalability and cost efficiency. Collaborate effectively with development teams to deliver high-quality cloud solutions.

# EXPERIENCE

**Systems Engineer (DevOps Engineer), TCS** – Mumbai **July 2022 - Present**

* Built and maintained robust CI/CD pipelines using GitHub Actions and Kubernetes, **reducing deployment times by 50%** and automating build, test, and deployment processes to accelerate delivery cycles.
* Designed and developed a robust monitoring and observability solution using Kibana and CloudWatch, ensuring 95% service uptime and **improving incident response efficiency by 50%**.
* Leveraged Docker and Kubernetes to containerize applications, improving scalability and **boosting application performance by 30%**.
* Successfully led the migration of a critical legacy application from on-premises IBM to AWS, significantly **enhancing its scalability by 90%** to increase application processing capacity.
* Engineered an automated build script using Bash Script and ECS for fetching updated and secure application packages which **reduced incident by 60%**.
* **Technology Stack: AWS, Python, Docker, Kubernetes, K8, Terraform, IaC, Serverless, Containerization, Java, GitHub Actions, Kibana, ELK Stack, Linux, Bash Scripting, AWS ECS, CI/CD.**

**Cloud Computing Intern (AWS), Whizlabs** – Remote **August 2021 - January 2022**

* Integrated key AWS services such as Lambda, Boto3, IAM, EC2, S3, and RDS to create robust and user-friendly lab environments, providing hands-on experience for learners.
* Proactively **identified and resolved production issues** in EC2 servers to ensure the reliability and performance of lab services, preventing any disruptions to the learning experience.
* Provided exceptional customer support by **troubleshooting technical problems** and offering innovative solutions, fostering a positive learning environment.
* **Collaborated effectively with the development team** using Agile methodologies to deliver high-quality content and enhancements.
* **Technology Stack: AWS EC2, EKS, S3, VPC, IAM, Lambda, Boto3, RDS, EC2, CloudWatch, Cognito, CLI, Scripting, Python, Git, Jira, Confluence.**

**Full Stack Intern, Agriyaan** – Remote **January 2021 - April 2021**

* **Optimized website performance** through Nodejs, resulting in faster loading times and improved user experience.
* **Enhanced website security** by conducting penetration testing against **OWASP Top 10 vulnerabilities**.
* Developed a critical employee management system using Nodejs which **reduced manual workload by 90%**.
* Collaborated effectively with the development team using **Agile methodologies** to deliver high-quality content and enhancements.
* **Technology Stack: Node.js, OWASP ZAP, Burp Suite, MySQL, MongoDB.**

# EDUCATION

**Mumbai University** – **Mumbai, Maharashtra**

# *Bachelor of Engineering (B.E) in Information Technology — CGPA: 8/10* 2018– 2022

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# PROJECTS

**Portfolio App: Full-Stack Portfolio Website leveraging CI/CD Pipeline**

* Constructed a high-performance portfolio website using Vue.js, executed a fully automated CI/CD pipeline with GitHub Actions, deployed to AWS EC2 using Kubernetes, and optimized image management with Docker Hub.
* Technology Stack: Vue.js, GitHub Action, Kubernetes, Docker, Nginx, AWS EC2 Docker, Docker Hub.

**Farm Forecast App: ML-powered Rice Crop Yield Predictor App**

* Designed a Machine Learning-driven Android application that predicts rice crop yields with real-time data visualization sourced from IoT sensors; improved prediction accuracy by 25% using AWS services for enhanced data processing.
* Technology Stack: Linear Regression, Java, Flask, AWS Cognito, AWS EC2, AWS DynamoDB, IoT Sensors, ML.

# TECHNICAL SKILLS

* **Programming Languages:** Python, Java, Node.js, SQL, DSA, HLD, LLD
* **DevOps Tools:** Kubernetes, Terraform, Docker, Jenkins, Git, GitHub, CI/CD, Jira, Linux, Shell Scripting, Azure DevOps, Docker Hub, Repository, WinSCP, PowerShell, Putty, Postman, Hashing, Encryption, Monitoring and Observability, Troubleshooting
* **AWS Services:** Lambda, Event Bridge, API Gateway, Step Functions, Database, Logging, S3, RDS, DynamoDB, CloudWatch, ECS, CDK, EKS, ECR, NLB, ALB, VPC, Subnets, Security Groups, IAM, KMS, SSM, Secrets Manager, Cognito, Cloud9, SNS, SQS
* **Soft Skills:** Problem Solving, Teamwork, Leadership, Communication, Adaptability, Critical Thinking, Active Listening, Time Management

# PUBLICATIONS

**Rice Crop Yield Prediction using Machine Learning and Integrating IoT**

* This paper focuses on predicting the rice harvest and investigating the factors affecting rice production in various regions of the Maharashtra region of India. The software aims to provide a rice harvest using a random forest algorithm and accurately predicting the yield. To demonstrate the effectiveness of harvest forecasting, an Indian government database will be used in 34 districts of the Maharashtra region, India. Boundaries such as rainfall, temperature, humidity, and location are given as a contribution to the random forest model to define the annual variation of the regional rice crop in Maharashtra. The software will also use other IoT devices to retrieve real-time data from the field. This will give an accurate result to farmers and prevent major losses to farming. With the help of powerful services like Amazon Web Services (AWS), Java, and Flask it tends to work on low-end devices and remote regions.
* *Journal- International Journal of Advanced Research in Computer and Communication Engineering* (IJARCEE - May 2022 Edition)
* Paper URL: [Paper Link](https://ijarcce.com/wp-content/uploads/2022/04/IJARCCE.2022.11417.pdf)

# VOLUNTEER EXPERIENCE

* Beach Cleanup Drive: HOPE (TCS) – Mumbai
* Esports Event Manager: BVCOE – Mumbai

# CERTIFICATIONS

* AWS Certified Solutions Architect - Associate (SAA - C03)
* AWS Certified Cloud Practitioner (CLF - C02)
* Python Workshop Certificates - IIT Bombay

# ACHIEVEMENTS

* Applause Award - Tata Consultancy Services (TCS)
* On the Spot (Team) Award - Tata Consultancy Services (TCS)
* Appreciation Certificate - Tata Consultancy Services (TCS)
* Solved **200+ Data Structures and Algorithm** problems on coding platforms such as LeetCode, GeeksforGeeks (GFG) & Hacker Rank
* Active Participant in TCS Ideathon and CodeVita
* Secured **3rd Position** in Internshala Hackathon