# TKARSH CHOUHAN

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"Recent Computer Science graduate with a strong foundation in DevOps, cloud technologies, and full-stack web development. Experienced in designing and deploying scalable, high-performance applications using modern tools. Passionate about research around emerging technologies. Seeking to enhance technical expertise and drive innovation through a Master's program in Computer Science."

#### Education

#### **Galgotias University**

Bachelor of Technology in Computer Science and Engineering

• Cumulative GPA: 8.29 (1.8 - According to Bavarian Formula)

#### **Relevant Coursework**

- Data Structures
- Java Programming
- Python Programming
- Web Technology

• Computer Networks

- Compiler Design
- Database Management **Operating System**
- Artificial Intelligence
- Analysis and Design of
  - Algorithms

#### Projects

### E-Learning Platform | Python, HTML/JavaScript/CSS, Docker, Jenkins, AWS Cloud

- Designed and developed a robust E-Learning platform using Django. Automated deployment and continuous integration using Docker and Jenkins on AWS Cloud.
- Implemented student and teacher login systems, course management, and content uploads.
- Integrated quiz creation, submission, grading, and assignment tracking features.
- Built tools for teachers to upload chapters, manage subjects, and send notifications.

#### Crudder: Micro-Blogging Application | Python, HTML/JavaScript/CSS, AWS Lambda

- Developed "Crudder," a feature-rich micro-blogging application where users can post self-destructing photos and text entries called "Cruds."
- Streamlined the deployment pipeline using Docker container and Jenkins.
- Leveraged AWS Lambda for serverless architecture, ensuring cost-effective and scalable deployment.

### CLI Conference Booking System | GoLang

- Developed a Go-based ticket booking system with real-time ticket availability updates and user input validation.
- Implemented error handling and validation to ensure proper input formatting, with ticket limits and email structure restrictions.
- Simulated email confirmations and implemented a delayed confirmation feature using time. Sleep, with the system automatically shutting down once all tickets were booked.

### Experience

#### **Binmile Technologies**

Data Science Intern

- Technologies Used: Python, pandas, scikit-learn, SQL, Apache Airflow, Tableau
- Developed and deployed a predictive model to forecast customer churn, achieving a 92% accuracy.
- Built and optimized data pipelines for ETL processes using Apache Airflow, reducing data processing time by 15%.
- Created interactive dashboards in Tableau, presenting key metrics and insights to senior management.

#### AICTE - EduSkills

AWS AI-ML Virtual Internship

- Developed and deployed a sentiment analysis tool using AWS Sagemaker, AWS Lambda and Amazon Comprehend to analyze customer feedback data.
- Managed data storage, security, and access control using AWS IAM policies and S3 bucket encryption for sensitive datasets.
- Monitored AI model performance with Amazon CloudWatch and implemented automated scaling to ensure optimal performance under varying workloads.

August 2023 – November 2023

July 2022 – September 2022

Noida, India

Remote, India



## Sep. 2020 – June 2024 Greater Noida, India



2023

2024

2023

#### Publications

#### **Optimizing Cloud-Based E-Learning Platforms** | <u>IEEE I2CT</u>

- Conducted comprehensive research comparing cloud-based e-learning platforms focusing on deployment and performance optimization techniques.
- Evaluated cost, scalability, performance, and customization of LMS platforms.
- Applied cost-effectiveness models, case studies, and quantitative performance metrics to assess platform efficiency.
- Analyzed server-based versus serverless cloud deployment models to determine the optimal solution.

#### Comparing Microservices and Monolithic Applications in a DevOps Context | <u>IEEE ASIANCON</u> October 2023

- Researched the integration of DevOps and microservices to enhance application development agility and efficiency.
- Analyzed the advantages of microservices over traditional monolithic architectures for large-scale applications.
- Identified best practices for implementing DevOps and microservices strategies in organizations.
- Provided insights on optimizing application growth and maintainability through modern development practices.

#### Technical Skills

Programming Languages: Python, GoLang, Bash Scripting
Technologies: Git and GitHub, Linux, JFrog, Jenkins, Docker, Kubernetes, JUnit
Cloud/Databases: AWS Cloud, MySQL, MongoDB
Web Development: HTML, CSS, JS, WordPress

#### Additional

Languages: Hindi(Native), English (C1, IELTS Academic - Band 7.5,) German (B1 - Conversational) Interpersonal Skills: Collaboration, Adaptability, Problem-Solving

#### Certificates

AWS Academy Graduate: Cloud Foundations, Machine Learning Foundations, Data Analytics KodeKloud: GoLang GDSC-Galgotias University: 30 Days of Google Cloud - Bootcamp

#### June 2024