# Ayush Raj

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#### WORK EXPERIENCE

**IntrAinZ** Remote

Cloud Computing Intern

Jun 2024 - Jan 2025

- Streamlined websites using AWS services, managing 5+ EC2 instances and 3+ S3 buckets to improve scalability.
- Achieved a 20% reduction in deployment time through automation.

Interpe Noida, India

Backend Engineer Intern

Jan 2024 - May 2024

• Developed and deployed 10+ RESTful APIs, reducing response time by 30% and improving data flow efficiency by 25%, enabling seamless communication between multiple microservices and client applications.

#### **EDUCATION**

MS Ramaiah College Bangalore, Karnataka Graduation Date: Jun 2025

Bachelor of Engineering in Computer Science

#### PROJECT EXPERIENCE

### **Real-Time Anonymous Chat Platform**

Start Date - Present

- · Implemented real-time messaging using WebSockets, allowing users to exchange text messages instantly without delays, ensuring a smooth and responsive chat experience.
- Developed a system for randomized chat pairing, enabling anonymous conversations while maintaining user privacy and secure session handling through unique session tokens.
- Designed and optimized a scalable backend architecture using Node is and Express, ensuring efficient handling of multiple concurrent users and seamless communication across sessions.
- Created custom event handling mechanisms to track user connections, disconnections, and chat session status, preventing message loss and improving overall platform reliability.
- Integrated Java and J2EE components to enhance server-side processing and improve performance.

## **Attendance Management Using AWS Cloud**

- Designed and developed an attendance management system using AWS Cloud, capable of processing over 100 daily transactions while ensuring high availability and maintaining 99% uptime.
- Built a web-based interface that allows students to check in and out seamlessly, improving efficiency and reducing manual errors in attendance tracking.
- Integrated AWS DynamoDB as the primary database to store and manage attendance records, ensuring fast data retrieval and scalability for handling increasing user activity.
- Utilized Java and RDBMS for enhanced data storage, retrieval, and query optimizations.
- Implemented secure authentication and role-based access controls, ensuring that only authorized users could access or modify attendance data while maintaining data integrity.

# **Abuse Detection System Using Machine Learning**

- · Developed a machine learning model to detect abusive or malicious activity in user-generated data, enhancing content moderation and security.
- Processed and analyzed over 50,000 data entries, applying advanced data preprocessing techniques to improve model accuracy and reliability.
- Trained and fine-tuned a classification model using scikit-learn, achieving an 85% accuracy rate in identifying harmful content.
- Collected and curated a diverse dataset, implemented feature engineering, and evaluated model performance using various validation techniques to ensure robustness.
- Integrated XML-based data handling to streamline data exchanges between various components.

## **SKILLS & INTERESTS**

Languages: TypeScript, JavaScript, Python, C++, SQL, HTML, CSS | Backend: Node.js, Express.js, Django,

RESTful APIs | Cloud & DevOps: AWS (EC2, S3, Lambda, API Gateway), Docker | Databases: MongoDB, Skills:

PostgreSQL | Machine Learning: TensorFlow, Scikit-Learn, Pandas, NumPy,NLP | Other Skills: WebSockets (Socket.io), Authentication (JWT, OAuth), Apache Airflow.