

# Uday Surya Kovvuri

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## EDUCATION

### Master of Engineering, Computer Science

Aug'23 – Dec'24

University of Cincinnati, Cincinnati, OH (GPA: - 3.95/4.0)

- Relevant Coursework: Advanced Database Management, Cloud Computing, Advanced Algorithms

## PROFESSIONAL EXPERIENCE

### Software Development Intern

Jan'23-Jun'23 (6 months)

CCG Technologies India, Chennai, India

- Contributed to the development of a scalable **e-commerce platform**, assisting in the creation of front-end components using **React.js** and back-end services with **Spring Boot**. Worked with the team to set up and configure deployment environments on **AWS**, including tasks related to **EC2** and **RDS (MySQL)**.
- Assisted in developing and testing **RESTful APIs** for product and user management, gaining hands-on experience with Spring Boot. Participated in daily stand-ups and sprint planning, contributing to **task management** and learning **Agile methodologies**.

### Research Assistant

Aug'22-Dec'22 (5 months)

Vellore Institute of Technology, Chennai, India

- Utilized **Depth-wise CNNs (VGG19, EfficientNet V2, ResNet50)**, **Python** for classification and detection, integrating them into functional software solutions that processed data from over 5,000 samples with high efficiency.
- Authored and **presented 4 research papers**, including one in a peer-reviewed journal, developing **AI models**, testing them with frameworks, and contributing to advancements in software development.

### Software Engineer Intern

May'22-Jun'22 (1.5 months)

Indian Institute of Information & Technology, Chennai, India

- Lead the development of an image processing application using **Python, Flask, and CNN algorithms**, focusing on the automation of medicinal leaf identification, which achieved a **high accuracy rate of 95%** in recognizing 30 distinct leaf types.
- Refined **data processing algorithms and optimized model architectures (VGG16, Xception)**, paralleling key software development tasks such as debugging, code optimization, and system scalability.

## SKILLS

**Programming Languages:** Java, Python, JavaScript, PHP, SQL, XML, HTML, CSS

**Frameworks & Libraries:** Spring MVC, Spring Boot, ReactJS, jQuery, Node.js, J2EE, JDBC, Flask, Streamlit

**Tools & Technologies:** Docker, Maven, git, Apache Tomcat, AWS, Azure, GCP, Rest APIs, Linux, Agile Methodology

**Databases & Analytics:** MySQL, PostgreSQL, Spark SQL, NoSQL, Tableau, R, Gephi

**Certifications:** AWS Certified Cloud Practitioner (CLF-C02), Microsoft Certified Azure Fundamentals

## PROJECTS

### Professional Portfolio Development

- Developed a responsive portfolio using **React.js** for the front-end and **Spring Boot** for the back-end, featuring dynamic content and a contact form.
- Deployed on **Amazon EC2 with Nginx** as a reverse proxy server, using Elastic IP for consistent access, **Route 53** for domain management, and SSL for secure communication. Integrated a **PostgreSQL** database hosted on **AWS RDS**, providing efficient storage and management of back-end data.

### Evolution and Performance Advancements of Spark SQL

- Enhanced Spark SQL **query performance** using Scala on **GCP**, achieving a 20% faster execution **compared to HiveQL**, which optimized data analytics processes for quicker insights.
- Analyzed Spark SQL's query execution and **Catalyst optimizer** effectiveness, demonstrating advanced skills in Apache Spark and GCP for **improved data scalability**.

### EventXperience: Integrated Ticket Booking and Management Platform

- Designed and implemented a **user-friendly online platform** for seamless **event ticket booking**, modification, and cancellation, providing robust management tools for administrators to oversee events and bookings efficiently.
- Advanced an intuitive and visually appealing front-end interface using **HTML and CSS**, enhanced functionality with **JavaScript and jQuery**, and ensured secure and efficient data storage and backend communication utilizing **MySQL and PHP**, reducing booking errors by 15%.

### Streamlit Web App with AWS Deployment and Docker

- Developed** a secure, authenticated login system using **Python, Java, and Streamlit**, ensuring a smooth user experience and secure file uploads.
- Integrated the application on **AWS using RDS** for database management, **ECR, ECS, Fargate, and Docker** for containerization, with an Application Load Balancer ensuring 99.9% uptime and **efficient load distribution**.