

# JOSE ROY

[www.joseroy.com](http://www.joseroy.com)

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## Professional Summary

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Computer Science graduate with hands-on experience in software development, web applications, computer vision, data analytics, and machine learning systems. Proficient in Python, Java, JavaScript, React, Next.js, and SQL. Experienced in building real-time systems, production-ready websites, and data-driven applications with strong problem-solving skills.

## Education

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**M.Sc. Computer Science** **2024 – Present**  
St. Joseph's University, Bangalore

**B.Sc. Computer Science** **2021 – 2024**  
Union Christian College, Aluva

## Technical Skills

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- **Programming:** Python, Java, C/C++, PHP, SQL
- **Web Technologies:** HTML, CSS, JavaScript, TypeScript, React, Next.js, Tailwind CSS
- **Frameworks & Libraries:** OpenCV, scikit-learn, PySpark, NumPy, Pandas, Matplotlib, Librosa
- **Databases:** MySQL, MongoDB
- **Tools & Concepts:** Git, GitHub, VS Code, REST APIs, Agile, Data Structures & Algorithms

## Projects

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**Personal Portfolio Website** *Next.js, React, TypeScript, MongoDB*

- Built and deployed a full-stack portfolio using Next.js App Router with integrated API routes.
- Developed an interactive Dino game with session storage and performance tracking using MongoDB.
- Implemented dynamic UI with 3D components and smooth animations for enhanced user experience.
- **Live Site:** [joseroy.com](http://joseroy.com)

**Smart Parking System (Computer Vision + Automation)** *Python, OpenCV, PHP, MySQL*

- Developed a real-time parking system achieving high-accuracy automatic license plate detection.
- Implemented dynamic slot allocation, QR-based payment flow, and GPS navigation.
- Built admin and user dashboards with MySQL-based data storage.

**Niradeepam Roller Flour Mill (Corporate Website)** *Next.js, React, TypeScript*

- Designed and deployed a production-grade corporate website for a real-world business.
- Implemented responsive UI, smooth scrolling, and advanced animations for optimal user engagement.

- **Live Site:** [niradeepamrollerflourmill.com](http://niradeepamrollerflourmill.com)

### 3D Audio Visualizer & Audio Reconstruction

*Python, Librosa, NumPy*

- Built a real-time 3D audio visualization tool for signal processing analysis.
- Achieved **85-95%** audio reconstruction fidelity using the Griffin-Lim algorithm.

### Big Data Weather Analysis

*PySpark, Spark SQL*

- Analyzed **96,000+** weather records using distributed PySpark workflows.

### Phishing Link Detection

*Python, scikit-learn*

- Built a Random Forest model using 80+ extracted URL and domain features to identify malicious links.

### Cricket Field Placement Prediction

*Python, scikit-learn, Pandas*

- Developed a Random Forest Regressor to predict batter shot direction based on historical data.

### Gesture-Controlled Game

*Python, OpenCV, Tkinter*

- Designed a real-time interactive game controlled entirely using hand gestures via computer vision.

### Multi-Round RSA Encryption Tool

*Python*

- Implemented a secure multi-phase RSA encryption system with dynamic prime number generation.

### Waste Management Awareness Website

*HTML, CSS, PHP, MySQL*

- Developed a responsive web platform to promote waste segregation awareness.

## Leadership & Responsibilities

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- **Event Head - Tech Terk IT Quiz:** Demonstrated **leadership** by spearheading the planning and execution of an inter-college quiz event.
- **Media Wing Member:** Displayed **adaptability** by designing digital content for official college events; received a Letter of Appreciation.
- **Secretary (Photography Club):** Exercised **organizational skills** by managing club records, communication, and event scheduling.

## Awards

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**Rajya Puraskar Award:** Second-highest honor in Indian Scouting, awarded for excellence in leadership, survival skills, and community service.

## References

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- **Dr. A. M. Bojamma** – Dean, Department of Computer Science, St. Joseph's University  
[bojamma@sju.edu.in](mailto:bojamma@sju.edu.in)
- **Dr. Asha Das** – Assistant Professor, Union Christian College, Aluva  
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