

# Lokeshraja Balaji

**Date of birth:** 06/12/2003 **Place of birth:** Ariyalur, India

Nationality: Indian

Gender: Male

# CONTACT

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# **ABOUT ME**

I'm an enthusiastic Information Technology graduate with a deep interest in solving real-world problems through code. With a strong foundation in software development, data structures, and algorithms, I've developed scalable applications using Java, Python, and SQL, and explored applied machine learning through hands-on projects. I'm a fast learner, curious by nature, and enjoy working at the intersection of technology and innovation. Beyond coding, I thrive in collaborative environments and am always eager to explore new ideas that push the boundaries of what's possible.

### **EDUCATION AND TRAINING**

2021 - 2025 Thanjavur, India

**B.Tech Information Technology** SASTRA University

Website <a href="https://www.sastra.edu/">https://www.sastra.edu/</a> | Final grade 7.01/10

2019 - 2021 Tiruchirappalli, India

Higher Secondary Chinmaya Vidyalaya Matric Higher Secondary School

Website https://cvschooltrichy.org/

2017 - 2019 Tiruchirappalli, India

Secondary School Chinmaya Vidyalaya Matric Higher Secondary School

Website https://cvschooltrichy.org/

# LANGUAGE SKILLS

MOTHER TONGUE(S): Telugu

Other language(s):

**English** 

Listening C1Spoken production C1Reading C2Spoken interaction C1

Writing C1

#### **Tamil**

Listening C2 Spoken production C2
Reading C2 Spoken interaction C2

Writing C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## **SKILLS**

#### **PROGRAMMING LANGUAGES**

Java (computer programming) | Python (computer programming) | JavaScri pt | PHP | C++

FRONTEND DEVELOPMENT

HTMI & CSS

**BACKEND DEVELOPMENT** 

Node.js / Express | Express

**DATABASES** 

MySQL | Mongodb / Mongoose

#### FRAMEWORKS & LIBRARIES

React Framwork | Numpy, pandas, matplotlib, Tensorflow

# **PROJECTS**

#### 08/01/2025 - 08/05/2025

# A NOVEL APPROACH TO HEART DISEASAE PREDICTION USING ENSEMBLE LEARNING AND FEATURE SELECTION

Designed and implemented a high-performance heart disease prediction model by integrating ensemble deep learning techniques (MLP, CNN, BiLSTM) with advanced feature selection algorithms (MRFO, DOPOA, HHO). The project emphasized robustness and accuracy through extensive data preprocessing, feature clustering using K-Modes, and soft voting strategies.

# **Key Contributions:**

- Built a full machine learning pipeline from data ingestion to model evaluation.
- Applied and compared multiple bio-inspired optimization algorithms for feature selection.
- Evaluated model performance using metrics such as ROC-AUC, accuracy, and confusion matrix, ensuring reliability through cross-validation.
- Achieved significant improvement in prediction accuracy by combining models and refining input features.

Link https://github.com/Lok0788/Heart-Disease-prediction-

#### 12/01/2024 - 16/04/2024

# **Image Steganography with Bald Eagle Optimization**

Developed a secure and efficient image steganography system that embeds sensitive information within digital images while maintaining high imperceptibility. The project leveraged the Bald Eagle Optimization (BEO) algorithm to enhance the embedding process by optimizing pixel selection for minimal visual distortion and maximal data security.

# **Key Contributions:**

- Implemented Least Significant Bit (LSB) steganography integrated with BEO for optimal embedding locations.
- Improved payload capacity and image quality (measured using PSNR and SSIM) through intelligent feature selection.
- Designed an end-to-end pipeline for encoding, encryption, decoding, and decryption of secret messages.
- Conducted extensive testing to evaluate robustness against common image processing attacks and ensured data recovery accuracy.

**Link** <a href="https://github.com/Lok0788/Image-Encryption-project">https://github.com/Lok0788/Image-Encryption-project</a>

#### 13/05/2025 - 10/06/2025

# **Attendance & Salary Management System**

Designed and developed a desktop-based application to automate employee attendance tracking and salary management within an organization. The system ensures efficient HR operations by integrating real-time attendance monitoring with automated salary calculations, leave deductions, and administrative controls.

#### **Key Contributions:**

- Developed user-friendly GUI using Java Swing for admin login, employee records, and attendance logging.
- Connected the front end with MySQL database using JDBC to manage persistent employee and salary data.
- Implemented logic for salary generation based on predefined leave policies and attendance records.
- Enabled efficient data retrieval and report generation for payroll and HR audits.

#### 01/10/2025 - 21/10/2025

#### Personal Portfolio Website (React + CSS)

Developed a fully responsive and interactive personal portfolio website to showcase academic achievements, technical skills, and projects, emphasizing clean UI/UX and immersive experience.

#### **Key Contributions:**

- Built with React.js using modular, reusable components, and implemented smooth dark/light mode with animated toggle.
- Designed fully responsive layouts with pure CSS, including smooth scroll navigation, motion animations, and interactive components.
- Optimized for accessibility, SEO, cross-browser compatibility, and deployed on GitHub Pages with version control via Git.

Link https://lok0788.github.io/lokesh-portfolio/