# Revathy M R

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#### EXPERIENCE

Webmaster Feb. 2025 – Present CUSAT, Kerala IEEE CUSAT

• In charge of development of community event websites and managing events for IEEE CUSAT SB

• Maintained structured codebase and documentation

Summer Intern May 2024 - June 2024 NIT Calicut Kozhikkode, Kerala

• Developed a mobile application focused on enhancing the safety of women in society using flutter.

- Gained expertise in mobile app development and geolocation services.
- Successfully completed project work at the Department of Computer Science and Engineering.

Web Team Associate April 2024 - Dec. 2024

IEEE CUSAT CUSAT, Kerala

- Spearheaded development of BotJungle website, a key project for IEEE CUSAT SB
- Contributed to team leadership and project coordination
- Participated in various events and community initiatives

Frontend Developer March 2024 - March 2025 NotimeKalamassery, Kerala

- Led web development projects from conception to deployment
- Gained valuable leadership and mentoring experience
- Contributed to the development of a restaurant Stop Off Burger website.
- Contributed to improving development processes and best practices

Intern June 2023 – July 2023

Infenox Technologies

Infopark, Kerala • Provided comprehensive feedback on the functionality and usability of software under development.

- Identified and reported bugs and suggested improvements for user experience.
- Contributed to the quality assurance process of the software.

#### EDUCATION

#### Cochin University of Science and Technology Kalamassery, Kerala Five Year Integrated M.Sc in Computer Science (Artificial Intelligence and Data Science) Nov. 2021 - May 2026 Kendriya Vidyalaya Kadavanthra, Kerala Higher Secondary Education June 2019 - May 2021

#### Projects

#### Git Time Machine | Node, HTML, CSS, Js, Git

Feb 2025

- Built at FOSS Hack 2025 to help developers visualize Git history and track changes more intuitively
- Features include interactive branch navigation, commit timeline visualization, and an advanced diff viewer.
- Supports full Git repository integration, remote synchronization, and branch management.
- Integrated real-time commit comparisons and branch timelines using JavaScript and Git CLI
- Designed as a personal tool; optimized for single-user dev projects

#### Ambulance Detector | Arduino, Seed Studio grove vision 2, xiao-esp32s3 sense

Dec. 2024

- Designed a prototype for automated ambulance detection using sound & vision input where, upon detection of an approaching ambulance through combined camera and sound inputs, the system triggers a change in traffic signals from red to green, ensuring a clear path for emergency vehicles.
- Integrated Grove Vision and Xiao ESP32 S3 boards to test traffic signal switching logic.
- Utilized the Seed Studio Xiao-ESP32S3 Sense for audio detection to capture ambulance sirens, pairing it with visual sensors to accurately identify ambulances.

- Oct. 2024
- A Progressive Web Application (PWA), prototyped within 48 hours for location-based task management with offline functionality
- Built for hackathon use-case, enabling geolocation-triggered reminders in busy environments
- Implemented Auth0 for user login experience
- Used MongoDB for task persistence and implemented offline sync support for reliability

# Garbage Management System | Scikit Learn, python, HTML, CSS, Js, Git

May 2023

• Developed for a hackathon, this system aimed at optimizing waste management using machine learning algorithms in Scikit-learn and a user-friendly interface built with React.

#### Academic Projects

#### Text to SQL | Python, scikit-learn, torch, pandas, numpy, datasets

April 2024

- Developed and fine-tuned a T5 Small model to automatically generate executable SQL queries from natural language descriptions, streamlining database interactions.
- Leveraged a text-to-text framework to reframe diverse NLP tasks, enabling consistent input/output handling and improving overall model versatility.
- Simplified complex SQL query generation, making database querying accessible to non-technical users while optimizing model performance and maintainability.

#### Public Health Data Analysis Research | Using R on National Seminar Publication

March 2024

- Conducted comprehensive analysis of NFHS-5 dataset examining correlations between women's literacy, socio-economic factors, and maternal-child health outcomes in India
- Published and presented findings at the Two-Day National Seminar on "PUBLIC HEALTH SYSTEM AT THE GRASSROOT LEVEL IN INDIA: REGULATORY AND POLICY LEVEL APPROACH"
- Utilized statistical analysis and data visualization tools to identify critical patterns
- Findings influenced policy recommendations for improving healthcare systems

### Exploratory Data Analysis | Python, scikit-learn, matplotlib, pandas, numpy

Feb. 2024

- Performed EDA on depression dataset based on economical and socio-living conditions.
- Reflected on various factors responsible for depression and was able to use it for good prediction models.

#### Volunteering and Mentoring

TinkHerHack 3.0

Feb. 2025

Mentor

Kerala, India

- Mentored 15+ participants at Tinkerhack 3.0; 90% of teams successfully deployed MVPs by event end.
- Supported data structure workshops with hands-on coding exercises and one-on-one mentorship.

#### IEEE Edsoc R10 section

Feb. 2025 – Present

 $GSM\ Coordinator$ 

Kerala, India

- Develop and implement strategies to recruit graduate students into IEEE.
- Promote IEEE membership benefits, such as access to technical resources, networking opportunities, and career development tools.
- Act as a mediator between graduate students and IEEE leadership, conveying their concerns and suggestions.

#### Space Carnival

Dec. 2024

Volunteer

Tinkerspace, Kochi

• Volunteered at Tinker Space Carnival by TinkerHub, celebrating their second anniversary and helping create an unforgettable experience for all attendees.

#### GDG Cochin

Oct. 2024 XIME, Kerala

Volunteer

- Volunteered at DevFest 2024 Kochi, efficiently managing registration and assisting both participants and speakers during the event.
- Enhanced my communication and multitasking skills by coordinating logistics and ensuring smooth operations throughout the event.
- Attended engaging sessions and a hands-on cloud workshop that broadened my technical perspectives and deepened my event management skills.

• Expanded my professional network by collaborating with industry experts and passionate tech enthusiasts, fueling my continuous growth in the tech community.

Web3 Kerala

Developer

August 2024 – Present

India

• Contributed with a team of 10-12 developers to build <u>w3kconfig.com</u>, Kerala's largest web3 conference website attracting 5,000+ attendees.

# **Problem Solving Workshop**

July 2024

Mentor

Kalamassery, Kochi

- Mentored a problem-solving workshop focused on basic data structures and algorithms, guiding students through hands-on sessions on loops, arrays, and essential debugging techniques.
- Fostered a collaborative learning environment where students could explore real-world coding challenges, celebrate breakthrough moments, and support one another in real time.

# TECHNICAL SKILLS

Languages: Comfortable: - Python, JavaScript, Java, HTML/CSS, R;

Familiar :- C++, SQL(Postgres, MySQL)

Tools & Frameworks: React, Node.js, Flask, Next.js, Three.js

Design: Figma

ML & Data: pandas, NumPy, Matplotlib, Tensorflow, scikit-learn

Others: Git, GCP, Firebase, Figma, Arduino

Areas of Interest: AI/ML, Cryptography, Blockchain, Web Development