GOPIKA GOPAKUMAR

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Portfolio | Linkedin

PROFESSIONAL PROFILE

Dynamic and motivated Software Developer with 2 years of professional experience in React.js and Material-UI. Skilled in designing scalable and responsive web applications, integrating REST APIs, and delivering user centric solutions. Proven ability to adapt to challenges, meet tight deadlines, and collaborate with cross functional teams. Passionate about leveraging innovative technologies to solve complex problems and enhance user experiences.

WORK EXPERIENCE

Embedded Developer (May 2025 - PRESENT)
iOrbit Digital Technologies - Trivandrum, India

- Developed and programmed embedded systems for innovative medical equipment using C, focusing on real time healthcare applications like ECG signal acquisition and patch based monitoring.
- Integrated sensor based modules using SPI, UART, and I2C protocols; implemented communication pipelines between microcontrollers and external peripherals.
- Worked extensively with the ADS1294R analog front end IC to capture and process real time ECG signals, optimizing for low noise and accurate data collection.
- Built and tested iECG patches that stream ECG data via Bluetooth to mobile applications for continuous patient monitoring.
- Utilized SEGGER tools (J-Link, RTT Viewer, etc.) for debugging, flashing firmware, and monitoring logs, ensuring system reliability during development.
- Experience across multiple IDEs and boards including STM32CubeIDE, Arduino IDE, PlatformIO, and ESP-IDF. Worked with boards such as STM32, Arduino Uno, ESP32, and Nordic nRF series.
- Developed a deep learning based arrhythmia detection system using Python in VS Code and Anaconda environment. Designed, trained, and validated the model from scratch, achieving 98% accuracy in ECG classification tasks.

Software Developer (July 2022 – July 2024)
Xminds Infotech Pvt Ltd - Trivandrum, India

- Developed responsive and user friendly web applications using React.js and Material-UI, resulting in a 25% increase in user engagement.
- Integrated REST APIs to enable seamless frontend backend communication, ensuring reliable and efficient data flow.
- Connected a PHP based backend to a dynamic React.js frontend, building complex dashboards with conditional logic, dynamic charts, and form management.
- Implemented secure authentication systems using AWS Cognito, improving login reliability and compliance with modern security practices.

- Designed and implemented graph visualization tools, reducing data analysis time by 30% through intuitive, real time insights.
- Worked in a sprint based agile environment with bi-weekly meetings, contributing to consistent progress and timely delivery of features.
- Collaborated closely with cross functional teams including designers, backend developers, and QA to deliver end to end solutions.
- Successfully delivered high quality features under tight deadlines and pressure, maintaining code quality and meeting project milestones.

EDUCATION

LBS Institute of Technology for Women - Trivandrum, India   (2018 – 2022)
Bachelor of Technology : **Information Technology**

Relevant Coursework :
C, C++, Python Programming, Data Structures, Object Oriented Programming, Web Development, Database Management Systems, Computer Networking, Data Communication.

Internships :
Networking & Hardware Internship – Gained practical experience in computer hardware components, LAN setup, and networking fundamentals through a 50-hour internship.

IoT & Python Internship – Worked on Python programming, sensor technology, and foundational web development. Gained hands-on experience in integrating hardware with software systems.

Academic Projects :
Smart Irrigation System (Prototype) – Arduino, Digital Moisture Sensor
Designed an IoT-based prototype that automates irrigation based on soil moisture levels, aiming to improve water efficiency in agriculture.

Diabetic Retinopathy Detection – Python, TensorFlow, Keras
Developed a model to detect diabetic retinopathy from retinal images. Compared two pre-trained CNN models to evaluate accuracy and reliability in real world detection scenarios.

SKILLS

- **Programming Languages :** JavaScript (ES6), Python, SQL, HTML5, CSS3
- **Frameworks & Libraries :** React.js, Material-UI, Node.js, Next.js,Express.js
- **Database Management :** PostgreSQL
- **Version Control :** Git, GitHub
- **Cloud & IoT :** AWS Cognito, Arduino,Firebase
- **Soft Skills :** Effective Communication, Team Collaboration, Time Management, Problem-Solving, Attention to Detail

PROJECTS

Datafree Portal - *React.js, Material-UI, REST APIs, AWS Cognito, PHP (backend)*

- Built a fully responsive web portal accessed by over 500+ users, streamlining secure data access and reporting.
- Integrated AWS Cognito for secure login and session management.
- Created dynamic dashboards with Material-UI, including real time graphs, conditional logic, and form based interactions.
- Connected a PHP backend to the React frontend via REST APIs, ensuring smooth and consistent data flow.
- Played a central role in designing and implementing data visualization, CRUD operations, and responsive user interfaces.

Comeonda - *React.js, Material-UI, REST APIs*

- Developed a responsive web application using React.js and Material-UI, optimized for performance on both mobile and desktop.
- Focused on frontend UI and interaction design, ensuring clean layout, intuitive forms, and responsive behavior.
- Integrated REST APIs to dynamically fetch and display user specific data across different views.

Pixovo - *React.js, Material-UI*

- Created a set of responsive, user friendly web pages focused on clean design and accessibility.
- Built consistent UI components using Material-UI, improving visual coherence and cross device usability.
- Prioritized page speed and interactive responsiveness during development.

PERSONAL PROJECTS

Simply Scribbled - *Next.js, Firebase, Material-UI, Responsive Design*

- A fully responsive blog platform where only admin users can perform CRUD operations while regular users can view blogs.
- Features include filtering blogs by date or keyword, pagination, admin dashboard, and form validations for a secure and structured content workflow.
- Built using Firebase Auth for role based access, and Firestore for real time data updates.

Tusk – Task Duel App - *Next.js, Firebase*

- A competitive task management prototype where users log in, join rooms via shared codes, and compete to complete tasks within 24 hours.
- Features a live scoreboard, winner detection, and animated progress tracking based on task completion.
- Built with Firebase Realtime DB and dynamic routing for real time multiplayer experience. Currently in the prototype stage, with planned logic and UI enhancements.

Norway Blog - *React js, CSS3*

- Developed a simple yet visually rich responsive travel blog with a strong focus on image handling and load time optimization.

Recipe App - *Next.js, Firebase*

- Built a single user meal planner allowing users to add recipes categorized by meal type (breakfast, lunch, etc.).
- Created a weekly timetable feature where users assign recipes to meals across the week.
- Automatically generates a grocery list from the timetable, allowing users to check off available ingredients.
- Includes form based inputs, sorting options, and plans for multi user expansion in future iterations.

INTERNSHIPS & CERTIFICATIONS

Internship: Computer Hardware and Networking

Institution: APJ Abdul Kalam Technology University

- Completed a 50-hour internship gaining theoretical and practical knowledge of hardware components and networking.

Internship: Hardware-Software Co-Design, Sensor Interfacing, IoT Deployment

Institution: Keltron

- Gained practical experience in Python programming, sensor technology, and foundational web development.

Certification:The Complete 2024 Web Development Bootcamp by Dr. Angela Yu

- Topics Covered: Full-stack web development including HTML, CSS, JavaScript, React, Node.js, Express, and SQL.