# Saka Upendranath

## IoT Embedded Systems Developer

**Saka Upendranath**
D.No: 2-4-2, 20th division
Eluru, PIN: 534001

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### Career overview

- I am an IoT and embedded hardware and firmware developer with experience in programming Atmega, STM32, SAMD, ARM, Arduino, Raspberry pi, etc.
- I have strong knowledge of product development using BLE, WiFi, LoRa, GSM, GPRS, GPS, GNSS, and DALI.
- Working knowledge of IoT strategy, standards, protocols, and different platforms like Thingspeak, Thingsboard, AWS, etc.

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### Key Competencies

- Firmware development and Architecture.
- Performance Optimization
- Troubleshooting and Quality control
- Agile Processes
- IoT end-to-end development

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### Skills

- Firmware development
- Cloud integration
- Team management
- PCB verification
- NodeRed implementation in Multitech gateway
- Project planning

## Work Experience

**Innovative Technologies /** IoT Embedded Systems Developer
OCTOBER 2018 - PRESENT, VIJAYAWADA

- Developing and implementing IoT solutions.
- Working with embedded c, python and AWS IoT cloud to build IoT systems.
- Designing, developing, and deploying software solutions for the Internet of Things and providing support to end-users.
- Collaborate with other engineers on projects.
- Participate in cross-functional project teams to develop IoT solutions.
- Participate in design reviews and code reviews with other engineers. Perform testing on products with other engineers.
- Communicate with customers about technical issues and provide customer service when needed
- Designed and deployed sensor networks and data acquisition systems for real-time monitoring and analysis of industrial equipment and processes.
- Collaborate with other engineers on projects.
- Participate in cross-functional project teams to develop IoT solutions.
- Participate in design reviews and code reviews with other engineers. Perform testing on products with other engineers.
- Communicate with customers about technical issues and provide customer service when needed

**Aditya Junior College /** Junior Lecturer
JUNE 2015 - SEPTEMBER 2018, ELURU

- Teach one or more of the core courses in the curriculum,
- Develop new courses and revise existing ones in line with changing needs.
- Participate in the academic life of the Department by sponsoring student organizations, serving on curriculum committees, and participating in other faculty activities.
- Engage in research to maintain a competitive profile through publications and presentations at professional meetings.
- Participate in departmental service obligations such as teaching overloads, advising graduate students, and participating on committees

## Programming

- C
- Embedded C
- Python
- Micro python
- MATLAB
- PLC programming

## Controllers

- ATMEGA
- STM32
- MSP430
- SAD51
- Nuvoton

## Protocols

- UART
- SPI
- I2C
- RS485
- DALI
- MQTT
- CoAP

## Communication

- BLE
- GSM(2G/4G/NB-IoT/LTE)
- LoRa
- WiFi
- ESP-NOW

# Education

**BVC College of Engineering, Rajahmundry,** B.Tech in Electrical and Electronics Engineering

SEPTEMBER 2010 - JANUARY 2015, RAJAHMUNDRY, ANDHRA PRADESH

**Siddartha Junior College, Eluru**

Intermediate

APRIL 2008 - MARCH 2010, ELURU, ANDHRA PRADESH

**RCM high school, Darbagudem**

10th

MARCH 2007 - MARCH 2008, PEDAVEGI, ANDHRA PRADESH

# Projects

**IoT System for Home Automation Project**

- **Company**: Innovative Technologies

- **Duration**: 1 year.

- **Description**: Designed and implemented a comprehensive IoT system for home automation, allowing homeowners to control lighting, heating, and security remotely.

- **Role and Responsibilities**: Led a team of engineers, conducted market research, and ensured user-centric design.

- **Key Achievements**: Reduced energy consumption by 25% and received user satisfaction for the web app interface.

**Skills used:**

- IoT System Design

- Embedded Systems

- Programming - Python, C++

- IoT Protocols - MQTT

- Hardware and Sensor Integration

- User Interface Design

**Weather monitoring system**

- **Company**: Innovative Technologies

- **Duration**: 6 months

- **Description**: Designed and developed a comprehensive weather monitoring system for real-time data collection and forecasting.

- **Role and Responsibilities**: Collaborated with a multidisciplinary

team, conducted data analysis, and improved forecast accuracy

- **Key Achievements**: Enhanced short-term weather forecast accuracy by 15% and received positive feedback for the user-friendly data visualization dashboard.

**Skills used:**

- Meteorological Data Analysis
- Sensor Integration
- Data Visualization
- Programming - Python
- Weather Forecasting
- Web Development

**Bluetooth-Controlled Robot Project**

- **Company**: Innovative Technologies
- **Duration**: 1 year.
- **Description:** Designed and developed a bluetooth-controlled robot with a focus on user specific functionalities.
- **Role and Responsibilities**: Collaborated with a cross-functional team, conducted testing, and enhanced robot performance.
- **Key Achievements:** Implemented a user-friendly mobile app for controlling the robot and improved mobility and responsiveness.

**Skills**:
- Robotics Design
- Bluetooth Communication
- Mobile App Development
- C/C++ Programming
- Hardware Integration
- Testing and Optimization

**IoT-Based Car Parking System Project**
- **Company :** Innovative Technologies
- **Duration:** 6 months
- **Description:** Designed and implemented an IoT-based car parking system for real-time monitoring and efficient parking space management.
- **Role and Responsibilities:** Collaborated with a multidisciplinary team, conducted feasibility study, and integrated IoT sensors with a cloud-based platform.*
- **Key Achievements:** Reduced parking congestion by 30%, increased customer satisfaction, and achieved 20% cost savings through data-driven optimization.

**Skills:**
- IoT System Design
- Sensor Integration
- Cloud Computing
- Data Analytics
- Mobile App Development
- Cross-functional Collaboration

**PLC with Motor Controlling Project**
- **Institution:** BVC College of Engineering
- **Duration:** 6 months

- **Description:** Designed, programmed, and maintained PLC-based control systems for motor control in industrial applications.
- **Role and Responsibilities:** Collaborated with a team, performed troubleshooting, and optimized motor control sequences.
- **Key Achievements:** Improved production efficiency by 20% and implemented cost-saving preventive maintenance schedules.

**Skills:**
- PLC Programming
- Motor Control
- Electrical Systems
- Troubleshooting
- Industrial Automation
- Team Collaboration

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## Personal details

***Permanent Address:*** # 2-4-2,20th division, Eluru, West Godavari dist. PIN:534001

***Date of Birth:*** 17th October 1991

***Language Known:*** English, Hindi, Telugu.

***Marital Status:*** Unmarried

***Nationality/Religion:*** Indian / Hindu

***Passport Number:*** N5625480 valid till 20/12/2025.

## Declaration

- I hereby declare the above particulars of information and facts stated are true and complete to the best of my knowledge.

Saka Upendranath.