VIJAY PEDDAPAKA

6304363390 | iam.p.vijay147@gmail.com | Hyderabad
Embedded Engineer | 7+ Years of experience

PROFESSIONAL SUMMERY

I am an experienced Embedded Engineer with over 7 years of dedicated expertise in the field. Throughout my career journey, I have honed my skills and knowledge in developing embedded systems, firmware, and software solutions for a diverse range of applications and industries.

My passion for embedded engineering stems from a deep-rooted curiosity and fascination with the intricacies of hardware-software integration. Over the years, I have had the privilege of working on various projects, from designing and prototyping embedded systems to optimizing performance and troubleshooting complex issues.

REAL TIME EXPERIENCED PROJECTS

- Buddy: The Voice assistance robot for kids(Raspberry pi based),
- Robocop(Raspberry Pi),
- Toy electronics,
- IoT Technologies
- Bowling Robot (Arduino, Raspberry Pi based),

TECHNICAL SKILLS

- Linux, Windows family, Raspbian
- Good Knowledge in Arduino controllers family
- Python, C, Arduino scripting
- Good grip on Hardware Knowledge.
- Good in Linux based projects
- Adobe Creative Cloud tools (Designing tools).
- Autodesk Maya, Blender

MY KNOWLEDGE ZONE IN

- All types of sensors interfacing with Arduino and Pi, ADC, LCD interfacing, DC motors servos, stepper motors, relays, Wi-Fi modules, node MCU, communication protocols, IoT, electronic circuits, PCB designing, Vector Designing, Photo Editing, 3D Modeling.

LANGUAGES

ENGLISH, HINDI, TELUGU

SKILLS

- Adaptive nature to learn new Technologies.

- **Completed 50+ Workshops on Arduino & raspberry pi as a Technical Trainer**

WORKING EXPERIANCE AND PROJECTS

Embedded Engineer June 2021 - Present
EoSoft Solutions PVT LTD

- Designing and architecting IoT solutions and embedded systems, including hardware components, and communication protocols, to meet the requirements of diverse Home automation applications.
- Developing firmware/software for embedded systems using programming languages such as C, C++, and assembly language, and optimizing code for performance, memory usage, and power consumption.
- Implementing communication protocols and technologies for connecting embedded devices to IoT platforms, cloud services, and other devices, ensuring seamless data exchange and interoperability.

- Integrating sensors, actuators, and other peripherals into embedded systems, and implementing algorithms for data acquisition, processing, and analysis to extract meaningful insights and drive intelligent decision-making.
- Integrating embedded systems with IoT platforms and cloud services, and developing applications for data visualization, monitoring, and control, to enable remote management and automation of IoT devices and systems.
- Conducting comprehensive testing and validation of embedded systems and IoT solutions, including unit testing, integration testing, and field testing, to ensure reliability, performance, and compliance with specifications and standards.
- Creating technical documentation, including design specifications, user manuals, and test reports, and collaborating with cross-functional teams, including hardware engineers, software developers, and product managers, to ensure alignment and success of projects.

Technical Trainer Jan 2020 - May 2021
TELENAGA ACADEMY FOR SKILLS AND KNOWLEDGE

- Delivering engaging and interactive training sessions on IoT concepts, technologies, and best practices to diverse audiences, including developers, engineers, and business professionals.
- Developing comprehensive training materials, including presentations, hands-on labs, and learning resources, that align with industry standards and address the evolving needs of the IoT ecosystem.
- Conducting hands-on demonstrations and practical exercises to reinforce key concepts and facilitate experiential learning for participants.
- Providing technical support and guidance to trainees as they navigate IoT development platforms, tools, and technologies, ensuring a positive learning experience and successful outcomes.
- Staying abreast of industry trends, emerging technologies, and best practices in IoT, and integrating relevant insights into training content and delivery.
- Collaborating with cross-functional teams, including sales, marketing, and product development, to support business objectives and promote the adoption of IoT solutions.
- Continuously evaluating and enhancing training programs and materials based on participant feedback, industry trends, and performance metrics to ensure quality and relevance.

CTO & Project Manager - Sept 2018 - Dec 2019
Kafeinno Solutions (R&D Robotics and IoT Development), Madhapur

- Technical Vision: Develop and articulate a clear technical vision for the company, aligning it with the overall business goals and objectives.
- Product Development: Oversee the development and maintenance of innovative products and solutions, ensuring that they meet customer needs and market demands.
- Technology Stack: Select and implement appropriate technology platforms and tools to support the company's product development and business operations.
- Research and Development: Drive research and development initiatives to explore new technologies, methodologies, and trends, ensuring that the company remains at the forefront of innovation in the industry.
- Technical Oversight: Provide technical oversight and direction to ensure that technology solutions are designed, developed, and implemented according to best practices and industry standards.
- Risk Management: Identify and manage technical risks, ensuring that appropriate measures are in place to mitigate and address them.

- Quality Assurance: Establish and enforce quality assurance processes and standards to ensure that technology solutions meet high-quality and reliability standards.
- Regulatory Compliance: Ensure that technology solutions comply with relevant regulations and industry standards, such as data privacy laws and cybersecurity requirements.
- Vendor and Partner Management: Manage relationships with technology vendors and partners, ensuring that they deliver high-quality products and services and meet agreed-upon terms and expectations.
- Technical Due Diligence: Conduct technical due diligence for potential acquisitions, partnerships, or technology investments, ensuring that they align with the company's technical vision and strategy.
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- Budget and Resource Management: Manage technology budgets and resources effectively, ensuring that they are allocated optimally and used efficiently to achieve desired outcomes.
- Continuous Learning: Stay updated on emerging technologies, trends, and best practices in the industry, and leverage this knowledge to drive innovation and improve the company's technical capabilities.
- Innovation: Foster a culture of innovation within the technology team, encouraging creativity, experimentation, and the exploration of new ideas and technologies.

Robotics Specialist Aug 2016 - Sept 2018
H-Bots Robotics PVT LTD

- Designing and integrating IoT sensors, actuators, and communication modules with robotic systems to enable data-driven decision-making and autonomous operation.
- Developing firmware and software for both IoT devices and robotic systems, using languages such as C, C++, Python, and ROS (Robot Operating System), to enable seamless communication and control.Implementing sensor fusion algorithms to combine data from various sensors, including cameras, lidars, IMUs (Inertial Measurement Units), and ultrasonic sensors, to enhance the perception and navigation capabilities of robotic systems.
- Developing algorithms and control systems for autonomous navigation and path planning of robotic platforms in dynamic and unstructured environments.
- Designing and implementing intuitive interfaces and interaction mechanisms for human-robot collaboration, including speech recognition, gesture recognition, and teleoperation interfaces, to enhance user experience and productivity.
- Integrating robotic systems with IoT platforms and cloud services to enable remote monitoring, control, and optimization of robotic operations, and leveraging data analytics and machine learning for predictive maintenance and optimization.
- Staying abreast of the latest developments in IoT, robotics, AI (Artificial Intelligence), and machine learning, and applying cutting-edge technologies and methodologies to drive innovation and solve complex challenges in robotics and automation.
- Conducting rigorous testing and validation of IoT-enabled robots, including simulation-based testing, hardware-in-the-loop testing, and field trials, to ensure reliability, safety, and performance under real-world conditions.
- Collaborating with cross-functional teams, including hardware engineers, software developers, and domain experts, and effectively communicating technical concepts and solutions to stakeholders and clients.

HABITUAL PROJECTS

- **Humanoid robot(5.5 feet)**

  Raspberry and Dynamic cell-based robot, move around like humans and include voice assistance, Metal detection, video surveillance, bomb diffusion, etc.

- **Mobile Controlled Robot**

  Using Arduino pro mini microcontroller and 434 MHz wireless system is included in the robot and controlled by Mobile.

- **Automatic lights control using LDR sensor**

  Using LDR sensor (light dependent sensor) depending sun light intensity outside light, if less sunlight lights will on and at high sun light lights will be off.

- **Remote Controlled Robot (3.5 feet)**

  Arduino and Battery-based robots, move around like humans on wheels and include Metal detection, bomb diffusion, Greeting guests, etc using Zig Bie

- **Bluetooth Controlled Robot**

  Using Arduino Mega microcontroller and HC-06 2.45Ghz Bluetooth device which can be operated remotely with in the radius and the robot is controlled by Bluetooth Joystick, and using low-power Bluetooth tech.

- **Wireless home security system**

  In this GSM-based security and message alerting systems are included. In this laser light and LDR sensor, IR sensors are used after locking then the kit is automatically activated, and if any unauthorized person tries to open it by deactivating the system. The system will send an alert message or call to the owner. In this Arduino controller and SIM900A, RF 434MHz wireless technology is included.