

Suman Satish

Senior IoT Solutions Architect

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US Work Experience

- May'18- **Senior IoT Solutions Architect** [PRESCRIPTIVE DATA](#), New York City, NY.
- Jul'19
- Provided technical leadership in vetting, research trials, and evaluation of emerging IoT technologies and their integration with Smart Building OS SAAS product.
 - **Research and Innovation IoT Lab:** In charge of building and managing Research and Development partnerships with IoT technology vendors. Conducted pilot studies, lab tests, and built prototypes to propose best sensor solutions which meet customer needs.
 - **Data Acquisition:** Data Acquisition Specifications of cloud-based API drivers to integrate various Building Management Systems (BMS) and IoT sensors with [Smart Buildings Product](#) that resulted in staggering savings in annual energy costs for real estate portfolio owners.
 - **Customer Success:** First-level of technical support for all customer issues raised via Zendesk. Developed, documented and implemented a standardized process for the company's Technical Customer Support process. Coordinated between various engineering teams and customers to provide prompt and satisfactory resolutions.
 - **Utility billing Application:** Measured and analyzed tenant electricity utility usage. Issued standard accurate utility billing statements to customers each month. Maximised customer's utility recovery costs by improving accuracy in measuring and recording standards using machine learning.
- Dec'16- **IoT Engineer** [COMCAST LABS](#), [COMCAST CENTER](#), Philadelphia, PA.
- Mar'18
- Designed and implemented proof of concept to enable remote health monitoring using commercially available BLE biometric devices over Comcast production LoRaWAN network.
 - Integrated off-the-shelf BLE enabled biometric monitoring sensors; the pulse oximeter, blood pressure monitor, and weight scale with a BLE + LoRa module and recorded biometric data trends on an application server dashboard. Programmed a HIPAA compliant application dashboard for caregivers to monitor health remotely.
 - Developed and evaluated prototypes for cutting edge technologies like Empathy Robot, Drone, Microsoft HoloLens, 7 dof Haptic interface, Long Range Bluetooth Routers, Radar for homes, non-invasive biometrics, and 3D printers by directly working on their SDKs to evaluate functionality and real-world feasibility.
 - Identified emerging technology trends and communicated business impact by authoring documentation like white papers, technical manuals and reports, formal recommendations, evaluation plans, confluence pages, presentations, mind maps, and test results.

- Sep'15- **Engineering Design Software Development Intern** [BOSCH RESEARCH AND TECHNOLOGY CENTER](#), Palo Alto, CA.
Dec'15
- Redesigned and automated a software suite used for designing automotive cooling fans and prepared it for use with commercial optimizers.
 - Reprogrammed data I/O routines to accept input from text files, and validated batch mode operation strategies by reproducing several test cases.
 - Implemented an algorithm for controlling iterative loops in batch operation and validated its functioning with tests.
 - Successfully adjusted the software to convert it from interactive to batch mode in its entirety.
- Mar'15- **Graduate Teaching Assistant** [DEPARTMENT OF PHYSICS, DREXEL UNIVERSITY](#),
Jun'16 Philadelphia, PA.
- Taught and managed undergraduate course on Fundamentals of Physics in a laboratory setting.
 - Demonstrated experiments, trained and assisted students in using laboratory apparatus, and computer software for accurate data analysis.
 - Helped students in extra office hours. Recorded and reported grades in a timely manner and received outstanding student evaluations and supervisor reviews for three semesters in a row.

International Conferences and Hackathons

1. [Real Estate Board of New York's PropTech Challenge 2018](#)

First prize winner under "Building Operations and Maintenance" category. My team [Seeing Green](#), built tenant app features that help building owners and tenants increase occupant engagement while increasing energy efficiency and savings.

2. [machineQ Smart City Hackathon 2018](#)

Volunteered in organizing and set-up of the full day event. Participated out of competition and quickly prototyped Smart City solutions for detection and minimizing crimes. Improved fire safety and road accidents using LoRaWAN technology.

3. [8th LoRa Alliance Open House and Market Place 2017](#)

Volunteered and participated in hands-on technical workshops, seminars on geolocation, scalability, and humanitarian applications of LoRaWAN. Successful rapid prototyping using hardware and network tools provided.

Education

2014–2016 **Master of Science in Electrical Engineering**
Drexel University, Philadelphia, PA, GPA: 3.57/4.00.

2010–2014 **Bachelor of Engineering in Instrumentation and Control Engineering**
Manipal Institute of Technology, Karnataka, India, GPA: 3.34/4.00.

India Work Experience

- 2022 - **Head of IoT Solutions and Services, Technical Manager & Solutions Architect**
Present [ADAPPT INTELLIGENCE](#), Bengaluru, Karnataka, India.
- Managing a team of fifteen hardware/software developers and field engineers.
 - Building monetizable IoT solutions and actionable insights for hybrid workspaces that result in real estate and energy savings.
 - Testing and evaluating the cost-effectiveness and scalability of IoT sensor-based solutions for various clients. Technical architect of a new Data-as-a-Service product.
 - Improving a sensor + cloud based solution for occupancy management, indoor air quality, and energy optimization for smart workspaces.
 - Providing technical support to existing customers, and managing communications with prospective customers and partner vendors. Responsible for engineering process flows and systems.

May'21 **IoT Lead** [ZEST IoT](#), Hyderabad, Telangana, India.

- Owned and managed IoT Solutions for aircraft turnaround operations and achieved complete digitization of ground operations at airports.
- Developed firmware code and defined frameworks that would ensure standard operating procedures to be followed for handling connectivity issues related to sensors deployed.
- Built network systems using different communication protocols, API's and hardware interfaces.
- Managed IoT product portfolio development, maturity process, stakeholders, and OEM teams.
- Defined and implemented novel solutions for proactive monitoring and remote management of devices deployed at various sites across verticals.

Sep'20 **Technical Lead (IoT)** [VECREAR TECHNOLOGIES](#), Bengaluru, Karnataka, India.

- Provided monetizable IoT solutions for Smart Home, Hospitality, Telecom and Manufacturing use cases. Built fully functional custom prototypes and conducted field testing for QA.
- Lead the Web and Mobile Application Development team to roll out industrial automation, asset lifecycle, and field service management apps using Agile delivery practices.
- Responsible for scoping and evaluation of scalability and cost-effectiveness of IoT sensor-based solutions for customers and partners across diverse industry verticals.
- IoT solutions for wearables, medication adherence, patient engagement, agriculture, and manufacturing. Built functional prototypes, conducted case studies, testing and reporting.

Technical Skills

Programming	Python, C, C++, smartBASIC, FORTRAN 90, NI labVIEW, VHDL, SQL, Intel 8085, 8051
Wireless Protocol	Wi-Fi, BLE, Zigbee, NFC, RFID, LoRaWAN Class A,B,C Wirepas Mesh
Data Science	Power BI, Tableau, Apache Spark, Apache Hive, Apache Hadoop, MongoDB, Microsoft Azure, SQL, AWS
Hardware	Arduino, STM32L0 MCU, Laird RM191, Force Dimension Omega.7 Haptic Interface, oscilloscopes, logic analyzers
IoT Principles and Tools	Device Provisioning and Management, Cayenne myDevices IoT Project builder, Cayenne Low Power Payload Specification, Actility ThingPark, The Things Network, and LORIoT Network Servers, Node-RED , Multitech Gateway
Embedded Electronics and Communications	Raspberry Pi, SODAQ ExpLoRer , Marvin Plug-n-Play LoRa Dev board, STM32L0 MCU, Seeed Studio Grove System Environmental Sensors, Ethernet, SPI, I2C, USART, CAN, BACnet, Modbus, Keil MDK ARM, STM32CubeMX
Internet Protocols	TCP/IP, WiFi, HTTP, MQTT, DNS, DHCP
Terminal Emulator	TeraTerm, Putty
Electrical Engg	MATLAB, Simulink, Pspice, LabView
Web-based Tools	Figma, Balsamiq, LaTeX, Microsoft SharePoint, Emacs, Vim, SolidWorks, WordPress, EndNote
Web	HTML5, CSS, XML, JAVASCRIPT
Operating Systems	Windows, Unix, Macintosh, RTOS
Version Control	Git

Currently Pursuing

1. **Master of Science in Information Systems Engineering & Management**
Harrisburg Institute of Science and Technology, Harrisburg, PA.
2. Artificial Intelligence and Machine Learning BlackBelt Certification Program by [Analytics Vidhya](#)