

# Aditya Srichandan

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[Portfolio](#) | [BuildoryX](#) | [LinkedIn](#) | [Google Scholar](#) | [GitHub](#) |



## ABOUT

Innovative and industrious undergraduate, currently working in Maxim Integrated Inc., Gandhinagar, IN, (part of Analog Devices Inc., San Jose, USA) as Supply Chain Data Analyst. Having an excellent exposure in research and business applications of AI, IoT & Robotics, Embedded Software, Supply Chain Analytics. Looking forward to pursuing master's program in Electrical & Computer Engineering, and to contribute to scientific research and applications in the field of Intelligent system interfaces and AI accelerated micro embedded processors.

## RESEARCH INTEREST

Deep Learning, Reinforcement Learning, Robotics (Perception), Internet of Things (Telematics), Embedded & Real time software systems.

## EDUCATION

Vellore Institute of Technology, Vellore | 632014 TN, IN

July 2017 – June 2021

Bachelor of Technology in Electronics & Communication Engineering (ECE)

CGPA: 8.54/10.00

**Relevant Coursework:** Data Structures and Algorithm, Computer Organization & Architecture, Operating Systems, Analog Electronics, VLSI, Digital Signal Processing, Network & Communications, Micro-controller and applications, Artificial Intelligence, Robotics & Automation, Internet of Things (IoT).

Shree J.C School of Science, Vadodara | 390021 GJ, IN

April 2016 – May 2017

Senior Secondary (12<sup>th</sup> Grade)

Cumulative Percentage: 85.5%

Gujarat Public of School, Vadodara | 390021 GJ, IN

April 2014 – May 2015

Matriculation (10<sup>th</sup> Grade)

CGPA: 8.80/10.00

## WORK EXPERIENCE

1. Supply Chain Data Analyst, Maxim Integrated (Part of Analog Devices Inc., San Jose, USA)

August 2021 – Present  
Gandhinagar, GJ, IN

- a) Currently working yield engineering team for wafer fab defect classification using deep learning and computer vision techniques.
- b) Improving semiconductor wafer Fab/testing/assembly planning optimization and inventory management using Machine Learning and blockchain technology.

2. Supply Chain Data Analyst Intern, Maxim Integrated (Part of Analog Devices Inc., San Jose, USA)

January 2021 – July 2021  
Gandhinagar, GJ, IN

- a) Worked with supply chain and operations team in San Jose HQ; Demand forecasting for Maxim Integrated products using machine learning forecast.
- b) Improved Maxim's Key Performance Indicator (KPI) in on-time delivery of products using time series deep learning, provide root cause analysis for not on-time deliveries.
- c) Overall ~15% improvement in delivery metrics KPIs using Machine Learning projections.

3. Embedded System Software Intern, L&T Technology Services (LTTS)

May 2019 – June 2019  
Bengaluru, KA, IN

- a) Device driver development on customized microcontroller boards of beagle bone, TIVA-C, STM32 to communicate with cloud.
- b) Developed a part of data streaming pipeline configuration using AWS IoT Analytics in the LTTS ongoing project on connected aquatic telematics for boats.

## PUBLICATIONS & RESEARCH WORK

1. **Imagination with Generative Adversarial Networks for Object Detection. (Accepted) 3rd IEEE International Conference on Innovations in Power and Advanced Computing Technologies (i-PACT-2021) to be held 27<sup>th</sup>-29<sup>th</sup> Nov** [\(demo\)](#) November 2021

Research Guide: Dr. Prakasam P. [\(Google Scholar\)](#)

Keywords: Computer-Vision, Robotics, Object Detection, Speech-to-Image GANs

[\(Accepted article link\)](#)

2. **An Improved Q-learning Approach with Kalman Filter for Self-balancing Robot Using OpenAI. Journal of Control Automation and Electrical System (2021). <https://doi.org/10.1007/s40313-021-00786-x>** [\(demo\)](#) August 2021

Research Guide: Dr. Malaya Kumar Hota. [\(Google Scholar\)](#)

Keywords: Control System, Kalman-Filter, Self-Balancing Robot, Reinforcement Learning

[\(Published article link\)](#)

3. **Smart Green House Gas Footprint Display with Integrated Smart Power Monitoring and IoT Actuation, International Journal of Recent Technology and Engineering, Vol. 8, Issue 5, Pg. 1243- 1247** January 2020

Research Guide: Dr. Anil Kumar K. [\(Google Scholar\)](#)

Keywords: IoT, Wireless-Sensor, Edge-computing. MQTT protocol

[\(Published article link\)](#)

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## PROJECTS

### 1. Semiconductor Wafer Fab and Assembly VR | Gandhinagar, GJ ([demo](#))

- Developed a VR platform for manufacturing wafer fab and assembly; User has ability to roam around the facility and educate themselves with semiconductor manufacturing and assembly processes of SOIC/MFN/QFN Integrated Circuits.
- Useful for organization seeking for remote industrial visits and training new hires during pandemic/COVID19 times.
- Built on React360 and React-VR framework stack. 3D modelling of machines using Blender.

### 2. 3D-Computer Vision: Pseudo Lidar for depth estimation | Vellore, TN ([demo](#))

- Implemented extrinsic/intrinsic camera calibration in Arducam stereo camera using Raspberry Pi & ROS interface for depth mapping.
- Generated disparity map with the Epipolar Geometry, StereoBGM (local/global) and deep stereo matching algorithm
- Generated 3D bounding boxes and 3D reconstruction of point clouds from depth images (Tesla's Pseudo lidar) on KiTTi dataset.

### 3. Realtime handwritten content detection | Vellore, TN ([demo](#))

- Developed a system based on STM32F429I-D (with touch screen & GUI) to detect hand-scribed texts and handwritten digits using Deep Learning (CNN and LSTM) model deployed on the STM32 with Cube MX AI framework.
- Implementation of touch screen interface with Board Support Package and HAL APIs of the microcontroller.

### 4. BuildoryX | Vadodara, GJ ([demo](#))

- Ongoing project to provide free online courses and hands on project sessions on latest technologies such as AI, Robotics, Virtual Reality applications, IoT, Embedded Systems. The E-Learning platform is built on MERN and NextJS frameworks

\*All the project demos uploaded on GitHub

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## ACCOMPLISHMENTS & EXTRA-CURRICULAR

### 1). 1<sup>st</sup> prize in ACCESS DENIED Hackathon, IETE Technical Chapter | VIT University, Vellore ([demo](#))

March 2019

- Panpharmacon - Disaster Management System:** Disaster management by live victim rescue tracking and realtime earthquake forecasting web app. Collaborative robot simulation with UGV and Drones to rescue survivors from perilous locations.

### 2). 3rd prize in MLH (Major League Hacking) Local Hack Day | VIT University, Vellore

December 2018

- Storage Monitoring using IoT for food supply chain logistics:** Data streaming web application using AWS Kinesis firehose, Realtime analytics with predictive machine learning to monitor a food quality while en-route and suggest shortest path A\* algorithm for trucks to maintain food quality.

### 3). Event Manager for Technical VIT-TUC (2018) | VIT University, Vellore

February 2018

### 4). Technical Core-Committee member of IET on Campus VIT | VIT University, Vellore

December 2017 - June 2018

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## CERTIFICATIONS

### 1). Sensor Fusion Nanodegree | Udacity, Online Course

August 2020

Theory and practical aspects of Lidar, Radar, Kalman filter and Computer vision, Implemented 4 projects as part of the nanodegree.

### 2). Data Science Nanodegree | Udacity, Online Course

August 2020

Project based course with hands-on Web scrapping, Machine Learning, and deployment to production.

### 3). PadhAI Deep Learning | IIT-Madras, Online Course

December 2019

Theoretical and capstone project-based course, with focus on latest Deep Learning research paper implementations.

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## TECHNICAL SKILLS

- Programming Languages:** Problem solving and competitive coding languages: C/C++, Java, Python, JavaScript,
- Frameworks and Libraries:** Proficient in working with libraries such as: Pytorch, TensorFlow, Robot Operating System (ROS), Open AI.
- Full Stack:** Experience in working with MERN, SQL Oracle/Server/Lite, NextJS, Java Spring boot, Docker.
- Hardware:** Practical Knowledge in Arduino, Raspberry Pi, Beagle Bone, NVIDIA Jetson, Embedded C, Mirco-Python, Assembly Language x86, AVR/STM32, Verilog HDL.
- Software and OS:** ARM Embed-OS, Linux, CUDA, Windows, Git-Hub, STM32-CubeMX, Carla Simulator for Self-driving car.

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## LANGUAGES

- Kannada :** Native Speaker
- English :** Fluent
- Hindi :** Fluent
- Gujarati :** Intermediate

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## REFERENCES

- Dr. Prakasam P,** HOD, SENSE, VIT University – Vellore
- Dr. Malaya Kumar Hota,** Professor, SENSE, VIT University – Vellore
- Dr. K. Anil Kumar,** Associate Professor, SCOPE, VIT University - Vellore

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