

Avinash Thiyagarajan

3rd year ECE, SASTRA deemed university

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Education

7.61 cgpa	B.tech , SASTRA deemed university	2017-present
92.58%	HSC , Velammal mat.hr.sec school	2017
93%	SSLC , Everwin mat.hr.sec school	2015

Skills

Programming	Python, Java, C++, JavaScript, SQL
Web frameworks and libraries	Django & Flask, HTML5, CSS(Bootstrap)
Languages	English, Tamil

Projects

IoT & RESTapi based webapplication services for Irrigation system automation	Productdev 7th sem, SASTRA
DJANGO, DJANGO REST FRAMEWORK, POSTGRES SQL	May.2020-June.2020

- API & IoT based irrigation system for farms where automation of irrigation is done using sensor data and API data.
- A web application that provided user accounts and stores various data from the farm like temp, humidity, motor runtime etc.
- Hard ware parts are nodeMCU and various sensors that are deployed which calculated and predicts when motor as to be turned on.
- <https://iotirrigator.herokuapp.com>

Image Encryption web platform	Research credits 6th sem, SASTRA
FLASK	March.2020

- Created a web application where users can encrypt images and download the encrypted image along with its unique decoding key.
- <https://prozone.herokuapp.com>

Secured & automated vehicle billing system	Mini project 6th sem, SASTRA
PYTHON, TESSERACT OCR AND MOBILE PHONE CAMERA	February.2020

- This project intends to collection real-time data of number plates using optical character recognition.
- Store the hashed value into a database and further, the system will keep track of the entry and exit time of the vehicle parked and charge the fee accordingly

Website Applications/sites

BACKEND : PYTHON(FLASK/DJANGO)	December.2020 - present
FRONTEND : HTML5 ,CSS, JAVASRIPT, BOOTSTRAP.	

- <http://audiotodoc.herokuapp.com> (A web app for converting audio to word document using Google API.)
- <https://mycru.herokuapp.com> (A comment section like webpage with JSON(Flask) /Postgresql(Django) as mode of storage)
- Corona realtime tracking webapp using COVID19py api

Gesture gaming system using CNN and LSTM	Soft-computing project, SASTRA
PYTHON LIBRARIES USED: TENSOR-FLOW, KERAS, NUMPY ETC	October.2019

- A game of stone paper scissor with a system based of Neural net as opponent.
- Uses image processing and CNN(Convolutional Neural Net which trains a model to recognise hand gestures.
- LSTM(Long Short Term Memory) Neural net then predicts the opponents future moves based on the pattern used before and automatically trains itself in every move.

Real time object tracking robotic arm	Tecs, SASTRA
MATLAB, ARDUINO UNO, MOBILE CAMERA	November.2018

- A robotic arm controlled by arduino micro-controller is used to point an object using laser and track the object in real-time as it moves
- The mobile camera feeds the image data which is used to detect the object using various image processing techniques.

Workshops & Courses

WORKSHOPS

Feb.19	Probe , Workshop on IOT with psoc organised by CISCO	NIT trichy
Mar.19	Pragyan , Workshop on Machine learning organised by MICROSOFT	NIT trichy

COURSES

- July.20 **Coursera Project network**, RESTful API with HTTP and JavaScript & Build Your first React Website
- June.20 **Coursera/AWS Training and Certification**, Getting Started with AWS Machine Learning
- June.20 **Coursera/Google cloud**, Industrial IoT on Google Cloud Platform
- June.20 **Coursera/LearnQuest**, Cloud Computing Basics (Cloud 101)
- ‘ may.20 **Udemy**, Creating API's with Django REST framework
- may.20 **TCS ion**, Career edge-knockdown the lockdown
- Apr.20 **TCS ion**, Career skills
- Jan.20 **Udemy**, Full-stack web-development boot camp

Publications

A Dual 3^2 Nibble Specific Cipher Model for RGB Images using Lorenz Attractor

*2nd International Conference on
Advances in Electrical and
Computer Technologies*

May.2020

AUTHORS

- Avinash T, Nithya Chidambaram, Amirtharajan Rengarajan

A Crypto Model for Confuse Cum Diffuse RGB Images: A Near Zero Correlation Approach

*4th International Conference on
Inventive Communication and
Computational Technologies*

April.2020

AUTHORS

- Avinash T, Ashwin kumar R, Nithya Chidambaram, Amirtharajan Rengarajan

Co-curricular Activities

TECS(Electronics club of SASTRA)

SASTRA

CORE MEMBER

July.2018 - PRESENT

- Gained expertise in organising non-profit workshops , especially targeted on electronics and IOT.
- Participated on a lot of competition like Eyantra.

IOT Workshop

Tecs, SASTRA

ORGANIZER

4th semester

- Organised workshop to students to teach the concepts of IOT using Arduino
- Taught about various sensors and arduino to make application oriented circuits

Basic circuit design Workshop

Tecs, SASTRA

ORGANIZER

6th semester

- Organised workshop to students to teach the basic concept of electronics through various circuits.
- learned about soldering and building various circuits.
- Gained an understanding of being team player and manage sections in workshop.

Simulators & Softwares

- 1st sem **AutoCAD**, Performed various Engineering drawings as a part on Engineering drawings course

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- 3rd sem **Multisim**, Done various simulation over this simulator like simple electrical and electronics circuits , current and voltage sensor simulation.

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- Matlab and Octave**, Learnt for coding in competitions(Eyantra) and for projects.

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