Aditya Kumar Singh

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Education

National Institute of Technology Tiruchirappalli — *Tiruchirappalli, Tamil Nadu, India*
BACHELOR'S DEGREE IN ELECTRICAL AND ELECTRONICS ENGINEERING — *Jul 2017-Present*
- Secured a CGPA of 8.85* out of 10

Kendriya Vidyalaya Tatanagar (CBSE affiliated) — *Jamshedpur, Jharkhand, India*
HIGHER SECONDARY EDUCATION — *Apr 2016–Mar 2017*
- Secured 92.6%

Kendriya Vidyalaya Tatanagar (CBSE affiliated) — *Jamshedpur, Jharkhand, India*
SECONDARY EDUCATION — *Apr 2015–Mar 2016*
- Secured 95% in Tenth grade

Academic Achievements

- Secured **1st place** in Eleckart, a circuit designing event at **IIT-M Shaastra'20,** a National Level Techno-management fest.
- Secured **1st place** in SCDC, a circuit designing event at **IIT-M Shaastra'20,** a National Level Techno-management fest.
- Secured **4th** rank in **eYRC-2018**, a National Level Robotics Competition organized by **e-Yantra, IIT Bombay**.
- **Finalist** of **Sangam**, an intra-college **Hardware Hackathon in Pragyan'19**(The International Techno-Management Festival of NIT-Trichy).

Projects

Summer Internship at Hewlett Packard Enterprise — *HPE*
Vega — *May. 2020 – Jul. 2020*
- The project aims to develop an AI-driven management system for primary storage. It was an undergoing live project hence a lot of new technologies were being tested to suits Vega's goal. I worked on testing the performance of technologies such as Kafka, Redis, Elasticsearch, etc. and wrote codes interfacing these using their GO clients and getting the performance output.
- NOTE: Due to the COVID-19 pandemic, the internship was a work from home internship.

Summer Internship under Prof. Kavi Arya at e-Yantra, IIT Bombay — *e-Yantra*
Bio-Inspired Sub—Carangiform FishBOT — *May. 2019 – Jul. 2019*
- The project aims to design, develop, and build a bionic sub-carangiform fish robot that can swim effectively and is controlled through a remote. The robot will have all basic features of a fish i.e. to go forward, take turns with variable radius and speed. The robot is cost-effective and has a battery backup of about 30 minutes.
- **GitHub Link:** *https://github.com/adityasingh3007/Bio-Inspired-Sub-Carangiform-FishBOT*

AntBOT — *e-YRC - 2018*
Image Processing, 3D Designing, PID Control, Path Planning Algorithms — *Nov. 2018 – Mar. 2019*
- To understand the cooperation and coordination in the work performed by the ants, we aim to make BOT which will depict the work of a single ant. The BOT will collect leaves, honey, wood from the Shrubs Area and store it for winter and/or remove the trash from its Ant Hills. The BOT will follow a pre-defined black path (same as path left by ants while traveling to collect supplies so that their fellow ants can follow it).
- **GitHub Link:** *https://github.com/adityasingh3007/AntBOT*

Portable Braille
Image Processing, Braille System (Grade 1 and Grade2) — *Dec. 2018 – Mar. 2019*
- The project aims to make a Portable Braille system as an assistive reading device to solve the problem of unavailability of many of the books and texts in Braille script. The camera captures the image in front of it and using 'pytesseract' data from the image is extracted and actuated on a braille terminal.
- **GitHub Link:** *https://github.com/adityasingh3007/Portable_Braille*

Personal Portfolio — *Dec. 2018 - Present*
HTML, CSS, JavaScript, JavaScript, jQuery, Bootstrap
- A portfolio to showcase my skills and experience rather than just writing it down on my resume.
- **Link:** *https://adityasingh3007.github.io*

Spider Inventory Management System
HTML, CSS, PHP, MySQL, JavaScript — *Apr. 2020 - Present*
- Designed and maintained the complete portal for inventory management system of **Spider R&D Club.** The portal has

features like issuing items to members, a list of all components in inventory and no. of units available, etc. The frontend was handled by using vanilla JavaScript and the backend was handled by using plain PHP. Currently, ReactJS is being used over the front end. Parallelly, Laravel will take over the backend. The database was handled by using MySQL. The portal will be hosted on Spider's server once the college reopens after the COVID-19 situation.

Spider's Induction Portal

HTML, CSS, PHP, MySQL, JavaScript *Apr. 2020 – Sep. 2020*

- After the success of the Tronix portal in the year 2019, the portal was revamped again this time generalizing it to all profile inside Spider R&D Club. Few new features were added which are – automatic allocation of the mentee to a mentor, mentors can download a contact card for their mentees. The portal was hosted on Spider's server.

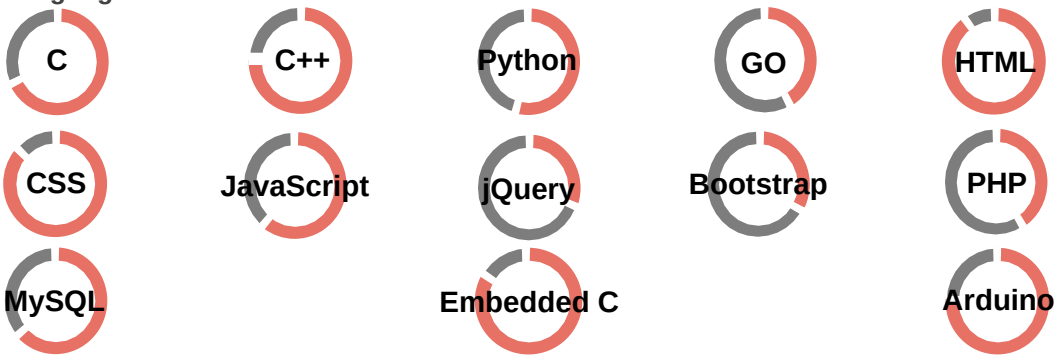
Spider Tronix Induction Portal

HTML, CSS, PHP, MySQL, JavaScript, Web Hosting *Apr. 2019 - Jul. 2019*

- Designed and maintained the complete portal for the inductions process of the **Tronix** profile of **Spider R&D Club.** The portal has features like grading, results declaration, announcements making, etc. The frontend was handled by using JavaScript and the backend was handled by using PHP. The database was handled by using MySQL. The portal was hosted on **Digital Ocean** server.

Skills

Programming Languages



Simulation and PCB Designing Software

Other Tools and Technologies

Languages Known

Position of Responsibility

President, Spider R&D Club of NIT-Trichy: *Apr. 2020 – Present*
Member since Jul 2018

Have participated in the projects/activities related to Embedded Systems, Robotics and Control, Signal Processing, and Machine Learning through various national and college-level competitions.

Workshop Coordinator, Currents: *Aug. 2018 - Present*
Currents is an annual Electrical and Electronics Engineering department's symposium NIT-Trichy. Organized and conducted various workshops during Currents'19.

Web Operation Team, Currents'19: *Dec. 2018 – Feb. 2019*
Helped in making the website for Currents'19, annual Electrical and Electronics Engineering department's symposium NIT-Trichy.

Extracurricular Activity

- Won **1st Prize** in **Carrom** in **Sportsfete-18**, an inter-department sports fest of college.
- Member of college's Carrom's Team.
- Part of the **NSO team** of NIT Trichy.