M. Aravind

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ACADEMIC DETAILS

Examination	University	Institute	Year	CPI/%
Bachelor of	Electronics & Communication Engineering			
Technology (Hons).	APJ Abdul Kalam	Thangal Kunju Musaliar		
	Technological University (KTU)	College of Engineering	2019	8.73
12^{th} AISSCE :	Science			
	Central Board of Secondary Education	Kendriya Vidyalaya Pattom	2015	93.8%
$10^{th} AISSE$:	Science	3 3		
	Central Board of Secondary Education	Kendriya Vidyalaya Pattom	2013	10.0

^{*}Other relevant test scores include:

1st year: Calculus (10/10), Differential Equations (10/10), Eng. Physics (10/10), Eng. Mechanics (10/10) **2nd year:** Complex Algebra (10/10), Probability, Random Processes and Numerical Analysis (10/10)

FIELDS OF INTEREST

• Machine learning & Artificial Intelligence, Computer Vision, Robotics, Internet of Things.

TECHNICAL SKILLS

- Languages (C, C++, Java, Python), Database (MySQL), Tools (LATEX, Eclipse, MATLAB, PSPICE, AUTOCAD).
- Hardware (Arduino, ESP8266, GSM module, INTEL 8085/86/51, Raspberry Pi)

ACADEMIC PROJECTS

- Underwater Surveillance using Autonomous Underwater Vehicle (Final Year B.Tech Project) (Nov'18 present, Guide: Prof. Shafi M.N, TKM College of Engineering)
 - o Currently developing an autonomous underwater ROV for surveillance applications.
- **Recent trends in moving object detection** (Summer Research Internship project) (*Institution: National Institute of Technology, Calicut, May'18 July'18, Guide: Dr. Sudhish N George*)
 - o Studied on different improvised PCA techniques for moving object detection in videos.
- Bluetooth Enabled Assistance for Differently-abled (BEAD) (Research paper)

(Guide: Dr. Gopakumar K, Jan'18 - present)

- o Accepted for IEEE TENSYMP'18 conference at Sydney, Australia. (couldn't publish).
- o Objective: To develop a low-cost guidance and navigation system for differently-abled.
- o Possible interaction between external elements and the user via inbuilt information exchange system.
- Advanced Vertical-Farming Assistive Setup (AVAS) (5th Semester Research Project) (*Guide:Prof. Reshna S., Oct'17 Nov'17*)
 - o Objective : Automation of Vertical Farming for better yield.
 - o Fuzzy performance analysis and comparison of growth attributes of subject plants with the ideal set.
 - Implemented automation using arduino, humidity and temperature sensors and servo motors and studied the response.
- **Autonomous Maze Solver** (4th Semester College Technical Fest Project) (*Mar'17*)
 - Objective :Made a self-path-finding bot (autonomous).
 - Uses Pledge algorithm (without using compass, but with a modified count technique).
 - The robot was designed to find the way out of a complex maze with 1 exit.

- **Line follower robot** (1st Semester Inter-College Technical Fest Project) (*Oct'15*)
 - o Objective: Made a simple line follower (both black and white track) using IR array.
 - o Finalist in Tathva by NIT Calicut.

EXPERIENCE

- Airports Authority of India, International Airport, Trivandrum: (July 2018) Got exposure to avionics studies and other important fundamentals relating to the airport operations.
- **Keltron Manufacturing Facility, Karakulam, Trivandrum**: (July 2016) Studied about security and surveillance systems, UPS manufacturing, related fabrication techniques and a bit of SMD soldering.
- **Founding member** of SIG (Special Interests Group), TKMCE: Aimed at providing necessary technical training to improve college student's industry-relevant skills.
- Took class on Microcontroller basics taking example of Arduino (Uno), as part of Special Interests Group's workshop at college.
- Attended workshop on PCB design and printing, conducted in college by IETE.
- Attended Big data workshop conducted by IEEE Trivandrum chapter (Kerala Section).
- Attended IOT challenge workshop by IIT Bombay. (Semifinalist team)

KEY ACHIEVEMENTS

- Google Science Fair 2013 Asia Pacific Regional Finalist (Project: BCI and speech synthesis).
- Google Science Fair 2012 Asia Pacific Regional Finalist (Project: Triphala effect on colon).
- Participated in the Oracle Thinkquest Digital Media competition and got appreciation.
- Participated in many National Level Science congresses, and Science exhibitions.
- Secured top ranks in Science and Maths Olympiads, school college and state level quizzes.

STRENGTHS

• Positive Attitude, Social Interaction, Hardworking.

INTEREST AND HOBBIES

- Have undergone 7 years of formal training in Mridangam (2008-15).
- Successfully completed 56km trekking at Agasthyarkoodam within 2 days. (44km covered on day 2).
- Have been practicing Yoga from age 5.
- Loves swimming and have also done river rafting.
- Active quizzer and a debater and have brought many laurels to my alma mater.
- Sub-40 Rubik's cube solver.
- Have got gold medal in abacus and mental arithmetic.
- Fond of geek stuff and loves technology (was school magazine editor).
- Plays Chess, Carrom, Table Tennis, Cricket, Football and Badminton.
- Was School Captain and held various other positions in the school council.
- College student member in IEEE, IETE and IEDC.