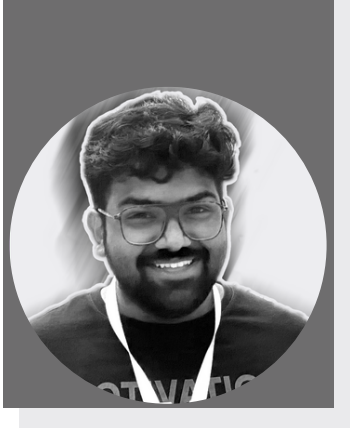

Bavath D

Developer

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Hi, I am a Developer, an Innovator, and a Maker helping out industries to improvise productivity by providing authentic innovative solutions from the knowledge that I pursue daily in the field of Embedded Systems, Artificial Intelligence, Machine Learning, Data Science, 3D Modelling & IoT.

Experience

Project Scientist — **Indian Institute of Technology-Delhi**

[October 2021 - Present] — Department of Design

Firmware & Django Developer — **Cindan Technologies**

[2019 - 2020] — Worked in Developing New IoT Products

Summer Intern — **Forge Accelerator**

[2017] — Participated in sector-based ThinkTanks and developed the problems discussed by experts into Problem Briefs

Education

M.Sc Physics — **Karpagam Academy of Higher Education**

2019-2021 — Graduated with the percentile of 71.6% with the development of the project in the virtual measurement framework

B.Sc Physics — **SNR SONS COLLEGE**

2016-2019 — Received a Bachelor of Science degree in Physics with a focus on Research and Development - Graduated with a percentile of 72%

AISSCE — **KENDRIYA VIDYALAYA**

2014 - 2016 — Class 12th Science and Mathematics Stream (CBSE) - Secured 78% in All India Senior School Certificate Examination

Skills & Softwares

Python 87%

C & C++ 87%

Embedded Systems 87%

Rust 45%

Javascript 75%

Data Processing and Data Analysis 81%

Research And Development 99%

Artificial Intelligence and Machine Learning 81%

Rapid Prototyping and 3D Modeling 75%

Projects

- **Design and development of low-cost Auto-CPAP for treating Obstructive Sleep Apnea (Indian Institute of Technology, Delhi, and ALL India Institute of Medical Science, Delhi)**
  Developing an Auto Titration Continuous Positive Airway Pressure Device for the people of low socioeconomic status.
- **Development of wireless Arthroscope for Arthroscopy (Indian Institute of Technology, Delhi, and All India Institute of Medical Science, Delhi)**
  Developing an ultra-low latency wireless video transmission with a portable light source Arthroscope for Arthroscopy
- **Design and development of Low-Cost ozone gas sensor (Indian Institute of Technology, Delhi)**
  Developing an ozone sensor for measuring ground level ozone gas.
- **Spatiotemporal study of CO2 level in the classroom by data collection, simulation and modeling (Indian Institute of Technology, Delhi)**
  A CO2 monitoring device was designed and developed for the spatiotemporal study of CO2 in a classroom. Around 20 devices were built, calibrated with reference monitors, and deployed for 6 months for data collection.
- **Data Visualisation of Indoor Air Quality of Children Home for a Better Lifestyle (Indian Institute of Technology, Delhi)**
  Indoor Air Quality monitoring devices were designed, and developed to study various indoor air parameters, including temperature and humidity inside the prison. The data were analyzed for suggesting better environment inside the children's home
- **Body Pose Detection Framework for yoga**
  Using TensorFlow Pose Net body pose detection framework was developed to teach yoga for users
- **Image Based Measurement System for size monitoring**
  OpenCV Based object size measurement using Camera.
- **Automated soil Nutrients and moisture monitoring and supply system using Mesh Network**
  Two different conductors were made to experience all sort of condition and made to learn various soil condition with the help of Machine Learning.
- **Agriculture Pest Prediction System**
  Machine Learning-based Integrated Sensor Environment to predict the upcoming pest attack.
- **Image processing based Plastic Color Sorting Machine**
  Raspberry-PI and PI Camera integrated with OpenCV framework for Color Sorting of plastics.
- **Leaf Disease Detection Rover**
  CNN Based UGV made to detect the types of pest on leaf using Opencv and Tensorfow framework.
- **Realtime Energy monitoring System**
  IoT Based Live Home Electricity Monitoring device integrated with SMS API.

- **Realtime Weather Monitoring System**
  Simple integration of all the sensors to measure the various environmental factors.
- **IoT based Invertor Battery Energy level Monitoring**
  Basic voltage and amps measurement device for monitoring battery energy level and finally displayed in the dashboard.
- **Algal Photo Bio Reactor for BioFuel Synthesis**
  Developed Photo Bioreactor for Algae growth and extraction of Biofuel.

Publications

- "Designing Low-Cost Manual CPAP Medical Device For Treating Obstructive Sleep Apnea Syndrome. (n.d.). In Design in the Era of Industry 4.0, Volume 2." At International Conference for Design 2023 held at IISC, Bangalore.
- Patented Wireless ECG Node on 2020 [Design# 332659].

Achievements & Awards

1. Research paper Titled **"Designing low-cost CPAP for Treating Obstructive Sleep apnea Syndrome"** was awarded as a distinguished paper at International Conference for Design 23, held at IISC Bangalore on January 2023.
2. Secured first in paper presentation at NIT Trichy presenting about Anti Gravity wheel.
3. Presented paper on NEMS technology and received first held at Sasuire Institute.
4. Received Special recognization award for making Planetarium at SNR Sons College.
5. Received Certificate of excellence as Social Media Coordinator at SNR Sons College.
6. Received Young Scientist Award of Department of Physics, SNR Sons College.
7. Top 10 innovators in Tamilnadu Startup Activation Program conducted by Forge and Entrepreneurship Development Institute - TamilNadu.
8. President of Entrepreneurship Development Cell of SNR Sons College.
9. Pride of the Department, awarded by Dept. of Physics, SNR Sons College.
10. Participated in Republic Day Camp NCC held on 26th January 2018 as an NCC cadet.

Personal Information

Date of Birth:	08/01/1999
Languages:	English, Hindi, Tamil, Malayalam
Address :	2/B Venkatraman Layout Sulur Coimbatore , TN, India - 641402

Declaration

I hereby declare that the above-written particulars are true to the best of my knowledge and belief.

Date: 02.08.2023
Place: New Delhi