



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

College of Engineering Trivandrum Campus
Thiruvananthapuram - Pin 695 016.

APPLICATION FORMAT FOR STUDENT PROJECT

SECTION A: GENERAL INFORMATION

1. Details of the Principal Investigator (Faculty who is guiding the project)
Name : Prof. Sarju S
Designation : Assistant Professor
Department : Computer Science and Engineering
Phone no : +919447233663
email id : sarju.s@sjcetpalai.ac.in
2. Name of the Co-Investigator (Faculty who is co-guiding the project)
Name : NA
Designation : NA
Department : NA
Phone no : NA
email id : NA
3. Name(s) of Student investigators: Akash Vijay (SJC20CS012)
Johns Raju (SJC20CS069)
Jose K James (SJC20CS70)
Tomin Joy (SJC20CS122)
4. Address of the Institution with college code : St. Joseph's College of Engineering and Technology, Palai, Choondacherry P.O, Kottayam, Kerala 686579 (College Code: SJC)
5. Category of Institute :

Govt.	Aided	Govt. Controlled	Autonomous	<input checked="" type="checkbox"/> Private
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6. Title of the project proposal : AQUA ROVER - Fighting Flood with Technology
7. Objectives of the proposed project :

The project aims to develop an autonomous navigation system for land and water vehicles, ensuring collision-free travel. In the initial phase, a moderate-sized convolutional neural network (CNN) is employed to recognize real-time objects via a Pi Camera feed, deploying TensorFlow for model implementation and OpenCV for video feed processing. The second phase involves behavioral cloning, enabling vehicles to autonomously navigate by mimicking human driving behavior based on the input video feed. Supplementary sensors, including ultrasonic distance, GPS, and a 6-DOF IMU, enhance navigation precision. Telemetry features monitor and collect operational data for analysis. A radio frequency system facilitates communication with a designated home station. In summary, this project integrates computer vision, machine learning, and sensor technologies, creating an advanced obstacle-detecting autonomous navigation system for both land and water vehicles.





Terms and Conditions

1. The scheme is constituted for the purpose of providing assistance in the form of grants to students for scientific project work with particular relevance to the State of Kerala in economic and industrial development.
2. The grant will be reimbursed to the principal investigator after the completion of the project through the Head of the institution.
3. The maximum duration of the project will be one year from the date of the start of the project.
4. On completion of the project, one copy of the final project report on the work done should be sent to the University along with the utilization certificate (UC), certified bills, bill wise statement and statement of expenditure (SE).
5. The institute shall maintain separate audited accounts for the project.
6. The institute shall not entrust the implementation of the work for which the grant is being sanctioned to another institution nor shall divert the grant receipts to other institutes as assistance.
7. The University reserves the right to terminate the project at any stage if it is convinced that the grant has not been properly utilized or appropriate progress is not being made. In addition, the University may designate a Scientist/Specialist or an Expert Panel to review the work done.
8. If the PI to whom the project has been sanctioned leaves the Institution, the Head of the Institution/PI shall inform the same to University and in consultation with the University, evolve steps to ensure the successful completion of the project, before relieving the PI.
9. Investigators must acknowledge the University in reports and technical/scientific papers published based on the work done under the project. Investigators are requested to publish papers emerging out of the project work in leading Journals.
10. If the results of project work are to be legally protected by way of patents/copyrights etc. the results should not be published without action being taken to secure legal protection for the project results.
11. The knowledge generated from the project will be the property of the University and should be properly acknowledged. Transfer of technology generated shall be done in consultation with the University.
12. For Private self financing Colleges, 50% of the actual Equipment cost subjected to the maximum of sanctioned amount will be reimbursed by KTU if and only if the proof of remittance of the other 50% is produced by the college.
13. Equipment details must be entered in the stock register of the college and signed by the Investigator, Lab in charge and Principal.
14. The University may enforce additional guidelines for the operation of the student project from time to time and the Institution/Investigators are required to observe such directions in the conduct of the project work.

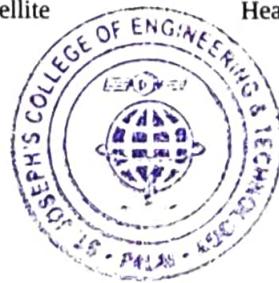
We agree to the terms and conditions stated above.

SARUS

Name & Signature of
Principal Investigator

Name & Signature of
Prof-in-charge, Satellite
Centre

(Office Seal)



29/01/24

Name & Signature of
Head of Institution





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APPLICATION FORMAT FOR STUDENT PROJECT

SECTION B: TECHNICAL DETAILS

1. (a) Title of the Project Proposal : AQUA ROVER - Fighting Flood with Technology
- (b) Branch / Subject area : Humanitarian Engineering, Internet of Things, Robotics, Artificial Intelligence
- (c) Project Type (Developmental/Demonstration/Others): Developmental
- (d) Expected scope/outcome (Tick the relevant one):
 Product / Prototype / Software / Hardware / Experiment / Publication / Technology / Patent / Innovations

2. Precise objective:

The project seeks to develop an autonomous navigation system for land and water vehicles, integrating a convolutional neural network (CNN) for real-time object recognition and behavioral cloning to emulate human driving behavior. Augmented by sensors such as ultrasonic distance, GPS, and a 6-DOF IMU, the system aims for precise navigation. Telemetry features will monitor and collect operational data, while a radio frequency system enables communication with a designated home station. The project explores integrating an affordable sonar or echo sounder system for submerged object detection. The overarching objective is to create a cost-effective and efficient obstacle-detecting driving system, ensuring collision-free travel on both land and water. This holistic approach merges cutting-edge technologies for a comprehensive autonomous navigation solution.

3. Abstract:

The proposed project aims to develop an obstacle-detecting driving system capable of guiding both land and water vehicles in their routes without collisions. The project consists of two main parts. In the first part, a moderate-sized convolutional neural network (CNN) will be employed to recognize objects in the input video feed from the Pi Camera. TensorFlow, a popular machine learning framework, will be utilized to deploy the CNN model. Additionally, OpenCV, a computer vision library, will be used to manage the video feed from the Pi Camera, enabling real-time object detection. The second part of the project involves implementing behavioral cloning techniques to enable autonomous navigation for the car/boat.





By training the car/boat using behavioural cloning, it will learn to mimic human driving behaviour and make appropriate decisions based on the input video feed. To enhance the navigation capabilities, the modified car/boat will be equipped with additional sensors such as an ultrasonic distance sensor, GPS, and a 6-DOF IMU (Inertial Measurement Unit). These sensors will provide crucial data for accurate positioning, obstacle detection, and motion tracking. Furthermore, the project aims to incorporate telemetry features to monitor and gather data during the car/boat's operation. This data can be used for analysis and performance evaluation.

To facilitate communication and control, a radio frequency system will be implemented, allowing the car/boat to reach a designated home station located at a specified distance. In addition to the above-mentioned features, an exciting possibility for further enhancement is the integration of a sonar or echo sounder system. This addition would enable the module to detect and locate objects or living organisms that are submerged underwater or underground. Currently, the main obstacle to implementing this capability is the high cost associated with acquiring the necessary sensor. However, the availability of an affordable sensor would effectively address this limitation, making it feasible to incorporate this functionality into the project. Overall, this project combines computer vision, machine learning, and sensor integration to develop an advanced obstacle-detecting driving system capable of autonomous navigation on land and water.

4. Methodology including the project design and plan of work

- Project Planning:

Define Objectives: Clearly articulate the goals and objectives of the autonomous navigation system, including the integration of object recognition, behavioral cloning, and sensor technologies.

- Hardware and Software Setup:

Select Hardware Components: Choose appropriate hardware components such as a Raspberry Pi, Pi Camera, ultrasonic distance sensor, GPS module, 6-DOF IMU, and radio frequency system.

Software Stack: Install and configure necessary software components, including TensorFlow for machine learning, OpenCV for computer vision, and relevant libraries for sensor integration.

- Object Recognition (CNN Implementation):

Dataset Collection: Gather a diverse dataset of images for training the CNN, including various obstacles that the vehicle may encounter.

Model Training: Implement and train the CNN using TensorFlow to recognize objects in real time from the Pi Camera feed.

- Behavioral Cloning:

Data Collection for Behavioral Cloning: Record human driving behavior in different scenarios to create a dataset for training the autonomous navigation system.

Model Implementation: Develop and train a behavioral cloning model that enables the vehicle to mimic human driving decisions based on the input video feed.





- **Sensor Integration:**
Connect and Configure Sensors: Integrate ultrasonic distance, GPS, and 6-DOF IMU sensors with the Raspberry Pi to provide crucial data for positioning, obstacle detection, and motion tracking.
- **Telemetry Features:**
Data Collection and Transmission: Implement telemetry features to collect and transmit operational data during the vehicle's operation. Utilize a secure and efficient communication protocol.
- **Radio Frequency System:**
Setup Communication System: Implement a reliable radio frequency communication system to enable the vehicle to establish a connection with a designated home station located at a specified distance
- **Testing and Validation:**
Simulation Testing: Conduct simulation tests to ensure the proper functioning of individual components and their integration.
Real-world Testing: Perform field tests to validate the autonomous navigation system in real-world scenarios, adjusting parameters as needed.
- **Documentation and Reporting:**
Detailed Documentation: Record all steps, configurations, and codes used throughout the development process.
Report Compilation: Compile a comprehensive report detailing the project's methodology, challenges encountered, solutions implemented, and results achieved.

Project Design

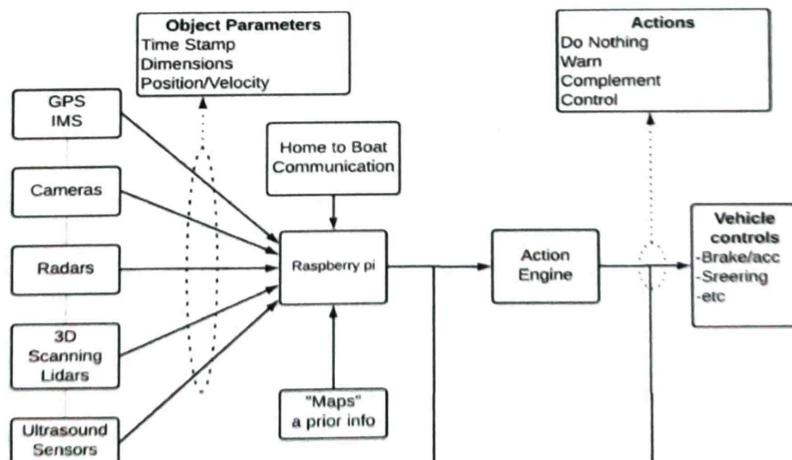


Figure 1: Elementary Block Diagram





Figure 1 illustrates the Raspberry Pi operating system's components and interactions. Sensors gather environmental data, which the "Understand" block processes to create an environmental model. Based on this model, the "Act" block selects and executes an appropriate action. The "Home to Boat" link enables communication with the boat, while the "Maps" block provides prior environmental knowledge. The "Engine" block controls the boat's engine, and the "Visualization/Display Sub-system" presents information to the user. This system can be used for self-driving boats, environmental monitoring, or remote boat control.

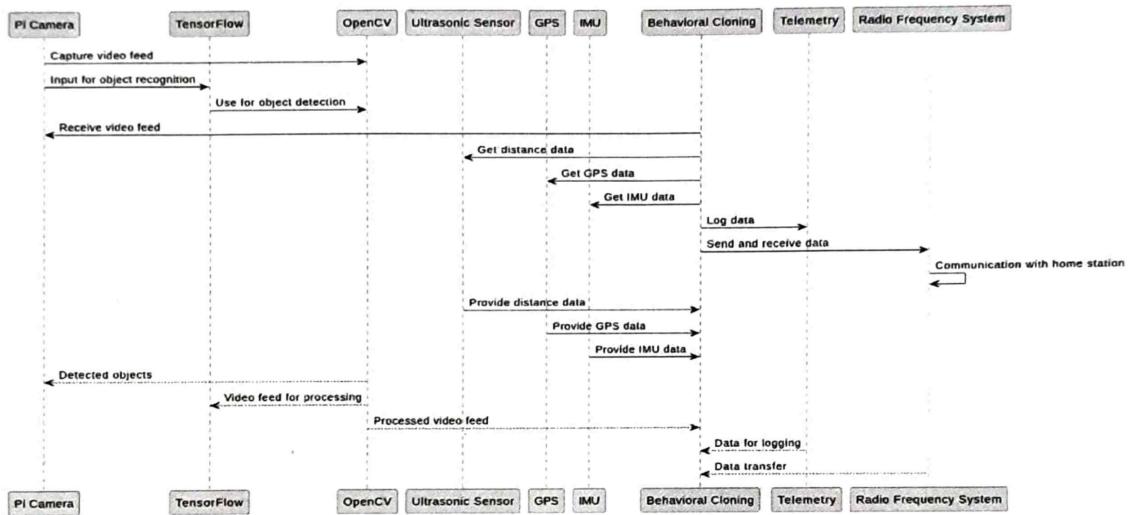


Figure 2: Sequence Diagram

Figure 2 illustrates the interactions and order of events between various components and actors involved in the autonomous boat system. It showcases the flow of messages and actions, depicting how the remote controller, rover components, and external systems communicate and collaborate to achieve autonomous navigation and operational functionalities. The diagram captures the dynamic behavior of the system, including the exchange of commands, sensor data, and control signals, providing a comprehensive visualization of the system's operational workflow and the interactions between its interconnected elements.

Action Plan

- Outline the requirements for the environmental sensing and boat control system, specifying functionalities for self-driving boats, environmental monitoring, and remote boat control.
- Choose the required sensors (e.g., environmental sensors, GPS), Raspberry Pi model, engine control interface, and display system.
- Set up the Raspberry Pi operating system and configure necessary software tools, including communication protocols, sensor drivers, and machine learning libraries if applicable.





- Physically connect environmental sensors to the Raspberry Pi and calibrate them to ensure accurate data collection.
- Develop algorithms for the "Understand" block to process sensor data and create a comprehensive environmental model.
- Develop the decision-making logic for the "Act" block, considering the environmental model to determine appropriate actions.
- Integrate the "Engine" block with the boat's engine control system, ensuring seamless communication for executing selected actions.
- Set up communication protocols and hardware interfaces for the "Home to Boat" link, enabling bidirectional communication between the central system and the boat.
- Develop the user interface for the "Visualization/Display Sub-system" to present relevant information to the user.
- Simulate various scenarios to test the system's responses under different environmental conditions and ensure correct decision-making.
- Implement the system on an actual boat, conducting field tests to validate its performance in real-world conditions.
- Prepare comprehensive documentation, including system architecture, hardware configurations, software setup, and user manuals.
- Collect feedback from users and stakeholders to identify areas for improvement and additional functionalities.
- Implement iterative updates and optimizations based on user feedback and emerging technologies.

5. Application /importance in the socioeconomic context:

The implementation of the AQUA ROVER in Kerala holds paramount significance given the state's susceptibility to frequent water-related challenges, including monsoons, floods, and coastal incidents. Tailored to Kerala's unique environment, the drone becomes a key tool in enhancing disaster response and preparedness. Its ability to navigate floodwaters, provide real-time data on water levels and weather conditions, and seamlessly integrate with local emergency response systems addresses the specific needs of Kerala's monsoon-prone regions, contributing to more effective early warnings and evacuations.

Moreover, the AQUA ROVER plays a vital role in safeguarding Kerala's extensive coastline. Equipped with high-quality cameras, sonar systems, and communication tools, the drone enhances coastal surveillance capabilities. It promotes community engagement by seamlessly connecting with existing rescue operations and coordination systems, ensuring localized and efficient responses to emergencies. In essence, the Aqua ResQDrone emerges as a multifaceted solution tailored to address Kerala's specific challenges, fostering resilience, sustainability, and community well-being.

Furthermore, the AQUA ROVER is a crucial asset in coping with sudden water disasters that often arise due to heavy rainfall or unexpected rainfalls. It also empowers individuals to take control of their safety by providing a means of self-rescue without depending solely on





any external people. This capability particularly benefits in providing assistance and enabling people to take proactive measures to ensure their well-being during water-related emergencies

6. Particulars of equipment required:

Sl. No.	Name of Equipment / Instrument
1	Raspberry Pi 3 Model B+ BCM2837B0
2	NEO-6M TTL GPS Module
3	Inertial Measurement Unit (IMU)
4	SNA 48V 900 Watt Controller for BLDC Motor
5	22.2V Li-Po Battery Pack
6	PVC Inflatable Boat
7	Waterproof Enclosures and Cables
8	3-Blade Propeller 3mm×28mm
9	E-flite Prop Shaft with Gear
9	5M-6GHz 20dB RF Signal Module
10	Ultrasonic Water Level Sensor
11	38.1mm Square Pressure Sensor
12	TF02-Pro LIDAR Distance Ranging Sensor 40M
13	Raspberry Pi Camera Module V2 - 8 Megapixel
14	Speaker for Assistance
15	Google Maps API
16	Cables, Resistors, ICs
17	Travel and other Contingencies





7. Particulars of any other facilities required:

KSUM Fab Lab, Kochi

8. Particulars of the facilities that will be provided by the institution where this project will be implemented:

- 1) PCB Fabrication Lab
- 2) Printing Facility
- 3) Digital Lab

9. Whether the scheme was submitted to any other organization for financial support, if so, the names of the institutions and their decisions may be indicated:

No

10. Budget Details: Estimated expenditure:

SI No	Items	Amount
1.	Consumables	NA
2	Raspberry Pi 3 Model B+ BCM2837B0	3,699.00
	NEO-6M TTL GPS Module	500.00
	Inertial Measurement Unit (IMU)	1,149.00
	SNA 48V 900 Watt Controller for BLDC Motor	3,769.00
	22.2V Li-Po Battery Pack	6,399.00
	PVC Inflatable Boat	25,000.00
	Waterproof Enclosures and Cables	1,500.00
	3-Blade Propeller 3mm×28mm	3,500.00
	E-flite Prop Shaft with Gear	1,465.00
	5M-6GHz 20dB RF Signal Module	1,059.00
	Ultrasonic Water Level Sensor	399.00





	38.1mm Square Pressure Sensor	500.00
	TF02-Pro LIDAR Distance Ranging Sensor 40M	6,950.00
	Raspberry Pi Camera Module V2 - 8 Megapixel	1,999.00
	Speaker for Assistance	500.00
	Google Maps API	2,800.00
	Cables, Resistors, ICs	500.00
3.	Travel	1,000.00
4.	Contingencies	2,000.00
	Total	64,688.00

Signature of Principal Investigator:
Name, Address & Telephone No:

Place: PALAI
Date: 29/11/24



Address: Assistant Professor, Dept. of Electronics & Communication Engineering, St. Joseph's College of Engineering and Technology, Chundakunnu P.O, Palai, Kottayam - 686579.
Dean Research,
APJ Abdul Kalam Technological University,
College of Engineering Trivandrum Campus,
Thiruvananthapuram -Pin 695 016.



Sarju S

Thapasya, Anthinad East, Anthinad P.O, Kollappally, Pala, Kottayam -686571

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LINKEDIN sarju-s



OBJECTIVE To impart knowledge to budding engineers while improving my mentor skills and hone my technical skills and to be an integral part of the reputed institution and seeking knowledge through professionalism and continual growth.

EXPERIENCE Working as an Assistant Professor in the Department of Computer Science and Engineering, **St. Joseph's College of Engineering and Technology, Palai** from June 2009 to present.

Working as a mentor for students at Young Innovation Programme organised by **Kerala Development and Innovation Strategic Council** November 2018 to present.

Working as a Nodal Officer in the **Innovation and Entrepreneurship Development Centre** under **Kerala Startup Mission** from March 2015 to present.

Working as a Faculty in Charge for **Developer Students Club by Google** at St. Joseph's College of Engineering and Technology, Palai August 2017 to present.

Worked as an instructor at **SPM ITC, Paravur**, Kollam. 2nd September 2004 to 27th September 2005

INDUSTRIAL Worked as a software engineer trainee in **Ernst & Young, Technopark, Trivandrum, Kerala** .4-Aug-2008 to 30-Apr-2009.

AWARDS

AND

RECOGNITIONS **Smart India Hackathon 2018 – Winner**

March, 2019 - MHRD, AICTE

Mentor for the team who won first prize at Smart India Hackathone 2019 held at Thirupathi.

Lamaara Technologies Pvt Ltd.

Mentor of student startup who got a brand equity investment of Rs. 50 Lakhs from Times Group.

Entrepreneurship Enabler Award 2018

November, 2018 - Kerala Startup Mission

Awarded to the Nodal Officer of Innovation and Entrepreneurship Development Centre for the contributions made by Startup Bootcamp SJSET - IEDC in nurturing Innovation and Entrepreneurial culture in state.

ICT TECHATHLON 2017 - Winner

January 2017 - ICT Academy of Kerala

Mentor of the team Penta, who won first prize in ICT TECHATHLON 2017 organized by ICT Academy of Kerala

Drona Award by IBM India - 2011

Awarded to the outstanding faculty mentor for guiding the student projects in The Great Mind Challenge 2010, A National Level project competition conducted by IBM India.

Sir C.V Raman Research Award by IET -2013

Awarded to the student in a particular student chapter for his commitment towards research, projects & Innovation, given by The Institution of Engineering and Technology.

RESEARCH
AREA

Data Mining, Natural Language Processing, Web Security

CERTIFICATIONS

- Artificial Intelligence with Machine Learning by Oracle Academy. Certificate earned on April, 2021.
- Python Basics for Data Science by IBM on edX. Certificate earned on December, 2020.
- Java Programming by Oracle Academy. Certificate earned on September, 2020.
- Diploma in RPA Design and Development by UiPath. Certificate earned on July, 2020.
- Introduction to Git and GitHub by Google on Coursera. Certificate earned on June, 2020.
- Learning to Teach Online by UNSW Sydney (The University of New South Wales) through Coursera. Certificate earned on June, 2020.
- Python 3 Programming Specialization University of Michigan through Coursera. Certificate earned on May 2020.

- Design Thinking for Innovation by University of Virginia through Coursera. Certificate earned on April 2020.
 - Python Programming: A Concise Introduction by Wesleyan University through Coursera. Certificate earned on April 2020.
 - Programming for Everybody (Getting Started with Python) by University of Michigan on Coursera. Certificate earned on March 22, 2020.
-

PROFESSIONAL Life Time Member: Indian Society for Technical Education (ISTE)

MEMBERSHIP Member: United Nations UNCTAD Empretec
IEEE Computer Society

EDUCATION

PhD (Doing)

Sathyabama Institute of Science and Technology, Chennai

Master of Engineering in Computer Science and Engineering

KCG College of Technology, Chennai

Anna University

CGPA – 8.48

Completed in 2014

Bachelor of Technology in Computer Science and Engineering

Younus College of Engineering and Technology, Kollam

Kerala University

CGPA – 7.17

Graduated in 2008

Diploma in Computer Hardware Maintenance

Government Polytechnic College, Attingal, Trivandrum

Board of Technical Educations, Kerala

Percentage - 79.25%

Completed in 2004

Pre-Degree with Maths, Physics & Chemistry

Sree Narayana College, Kollam.

Kerala University

Percentage - 63%

Completed in 2001

Secondary School Leaving Certificate

Kottapuram High School, Paravur, kollam

Board of Public Examinations

Percentage - 81%

Completed in 1999

**PERSONAL
DETAILS**

Name : Sarju S
Sex : Male
Date of Birth & Age : 11-05-1984, 39 years
Marital Status : Married
Hobbies : Reading, Coding
Address for Communication : Assistant Professor,
Department of Computer Science &
Engineering,
St. Joseph's College of Engineering &
Technology, Palai, Kerala, India – 686579
Phone Number : +91 9447233663
E mail ID : sarju.s@sjcetpalai.ac.in
mesarjus@gmail.com



SARJU S

Jose K James

josekjames5@gmail.com | Mobile: +91 6282802991

EDUCATION

St. Joseph's College of Engineering
and Technology, Palai
2020 - 2024 | Kerala, India
Current CGPA: 8.27

LINKS

portfolio:
bit.ly/cyberianweb1
linktr.ee/josekjames
Github:// [cyberianized](https://github.com/cyberianized)
LinkedIn:// [josekjames](https://www.linkedin.com/in/josekjames/)

COURSEWORK

UNDERGRADUATE

Introduction to programming in C
Data Structure and Algorithms
OOP in Java
Data Base Management System

OPEN SOURCE

Hacktoberfest 21' and 22'
FOSS Cell campus Lead

PUBLIC SPEAKING

Flutter Bootcamp Sessions
Android Development talks
C Programming sessions
YT link of online session

CERTIFICATIONS

Coursera

- Python for Data Science and AI
- Python Data Structures
- Introduction to the Internet of Things and Embedded Systems

edX

- Data Science: Productivity Tools
- AI Chatbots

SKILLS

PROGRAMMING

- Flutter • Java • Dart
- Python • UI/UX

Familiar:

- Figma • Linux • Git • Android

SOFTSKILLS

- Innovation • Management
- Leadership • Marketing

EXPERIENCE | COMMUNITY

FLUTTER INTERN | TechByHeart

May 2023 - Aug 2023

Led comprehensive Flutter workshops at TechByHeart's institute and AJ College, Mangalore, training over 100 interns and college students in the field of Flutter app development.

TECHNICAL LEAD | GDSC SJCET

Aug 2021 - Aug 2023

Mentoring students to excel in Google development technologies and open-source through personalized guidance.

FLUTTER LEAD | TinkerHub SJCET

Sep 2021 - Sep 2023

Facilitated 3-day hands-on bootcamps for Flutter app development, training over 200 students.

VICE-CHAIR COMPUTER SOCIETY | IEEE SJCET

Jun 2022 – March 2024

Key contributor to organizing talk sessions and programs for the CS society, and active volunteer for intercollege flagship events.

GOOGLE FLUTTER FESTIVALS FACILITATOR | SJCET

Feb 2022 – Feb 2023

Led 3 Flutter Festivals events, with an average attendance of 50 students per event.

PROJECTS

ProAgro | Flutter App

- Agricultural Marketplace app designed for farmers and buyers.
- Employs **MVC** architecture for organized code and efficient development.
- Utilizes **GetX** State management for handling and dynamic UI updates.
- Firebase Realtime Database, ensuring real-time data synchronization.
- Repo of application

Skillversity | Flutter App

- Skillversity helps **students** improve their financial literacy, mental health, and sex education - areas often overlooked in traditional schooling.
- **cleaner UI**.
- Repo of application

RehabApp | Flutter App

- App for tracking exercise session with real-time database backend.
- Implemented **MVC** architecture and used **GetX** State management for efficient state handling.
- **Firebase Realtime Database** for backend.
- Repo of application

ACHIEVEMENTS

- Ranked in the **Top 30** at **.hack(); 2022**, a **national level hackathon** organised by IEEE MACE.
- **Finalist Team** in **HOH 2.0 - hackathon** conducted by JEC Tamil Nadu.
- Recognized our project as the **best project** at **Saturday Hack Night** by TinkerHub.
- Earned a **2 Star** rating on **Codechef**.
- Qualified for **SnackDown 2021**, a Global Programming Competition.



Akash Vijay

SOFTWARE ENGINEER

SUMMARY

A dedicated B.Tech Computer Science student skilled in developing innovative solutions utilizing advanced analytics, statistical modeling, and software engineering principles. Proficient in leveraging software engineering methodologies to craft impactful solutions and contribute effectively to technological advancements.

PERSONAL DETAILS

Nationality

Indian

Location

Ponganparayil, Elikkulam P.O,
Kuruvikoodu Pin: 686577
Kottayam District, Kerala, India

CONTACT

akashvijay789@gmail.com

+919447146135

akashvijay.tech

[akash-vijay789](https://www.linkedin.com/in/akash-vijay789)

[akash-vijay](https://github.com/akash-vijay)

LANGUAGES

English Malayalam

VOLUNTEERING EXPERIENCES

Chairman, IEEE SB SJCET

June 2023 - Present

Implemented a new mentorship strategy within the student branch, connecting experienced members with newcomers to facilitate knowledge sharing and professional development.

Secretary, IEEE SB SJCET

May 2022 - June 2023

Spearheaded the organization in attracting participants from across the country and showcasing the chapter's prominence in the field of technology.

EDUCATION

St. Josephs' College of Engineering and Technology, Palai

B. Tech in Computer Science and Engineering - 75%

2020 - Present

Holy Cross HSS, Cherpunkal

Higher Secondary - 94%

2018 - 2020

Jyothi Public School and Junior College, Paika

Matriculation - 96%

2018

CERTIFICATIONS

Google Cybersecurity Professional Certificate

PROJECTS

- MEDLAB - A PWA that assists doctors in providing therapy to children with mental disabilities.
- Papa Whale - A learning platform to train pre-university students in trading
- Asthra CTF '22 - A web-based platform for students to practice CTF
- Covid SJCET - A website to monitor the up to date rate of covid infected students

SKILLS

Python	Numpy	Pandas	Matplotlib	Java	Object Oriented Programming
React	SQL	HTML, CSS, JS	Git	Linux	Virtualization
Time Management	Critical Thinking	Resilience	Analytical Skills	Collaboration	

ACHEIVEMENTS

- Third Prize - National Level Python Coding Competition, organized by SAEINDIA Southern Section
- First Prize - State Level Python Coding Competition, organized by SAEINDIA Kerala Division
- Published a research paper on 'Gender Differences in School Students' Perceptions Towards Engineering: A Case Study From Rural South India' at the EDUCON International Conference 2023
- Published a research paper on 'Rural School Students' Attitudes and Perceptions toward Engineering Education and Engineering Profession' at the FIE International Conference 2022



JOHNS RAJU

Computer Science Undergraduate, SJCET Palai

@ johnsrajum@gmail.com
johns-raju-90b327201

7034863808
JOHNSRAJU

Mannoor (H), Alanadu p.o

Palai, Kerala, India

EXPERIENCE

Placement Representative

SJCET

⌚ 2023 - Ongoing

- Coordinating all placement activities.
- Volunteering in placement drives.
- Managing student data.

Chief Creative Officer

IEDC

⌚ 2023 - Ongoing

- Coordinating all design work.
- Designing posters and other materials.

Design Lead

UI Path

⌚ 2022 - Ongoing

- Coordinating all design work.
- Designing posters and other materials.

Designer

IEEE

⌚ 2023 - Ongoing

- To design posters and other objects.

PROJECTS

1. Mini Project - PrintEase

Its an web application for management of copy shop at our college (SJCET).

2. Micro Project - LMS

Its a Library Management Software.

3. Hackathon Project - INNVENTO

A web application that provides a platform to showcase their projects and ideas.

TECHNOLOGY SKILLS

C Python
Java HTML JavaScript

Figma Photoshop

MOST PROUD OF

Third Prize - Python Competition

Third price at SAE India National Level Python competition contacted at SRM Easwari College Chennai.

First Prize - Python Competition

First price at SAE India State Level Python competition contacted at FISAT, Angamaly.

First Price - Refute Debate Competition

First prize in Refute Debate competition by IEEE SJCET, Palai.

STRENGTHS

Hard-working Creativity
Designing Skill Leadership Quality
Adaptability

LANGUAGES

Malayalam
English

EDUCATION

BTech in Computer Science

St. Joseph's College of Engineering and Technology, Palai

⌚ 2020 - 2024

Current CGPA - 7.85

Higher Secondary Education

St. Sebastian HSS School, Kadanad

⌚ 2018 - 2020

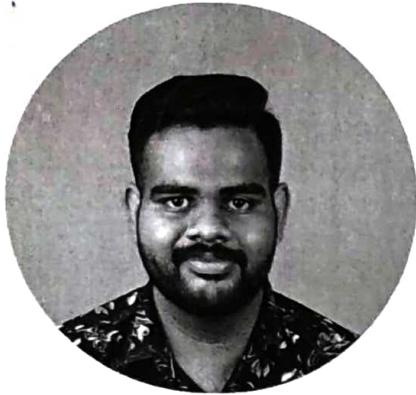
Percentage - 86.83%

High School

Carmel Public School, Palai (CBSE)

⌚ 2018

Percentage - 85%



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tominjoy@ieee.org

tomin-joy

Tomin-Joy

EDUCATION

Bachelor of Technology(Btech)

St. Joseph's College of Engineering and Technology, Palai, India, Kerala

2020 - Now

I am a Fourth year Computer science and Engineering student.

Higher Secondary

Chavara CMI Public School, Palai, India, Kerala

2018 - 2020

High School

Alphonsa Residential School, Bharananganam, India, Kerala

2015 - 2018

SKILLS

- Java
- Python
- Web Development
- React Js
- Event Organization and Coordination
- Leadership

LANGUAGES

- English
- Malayalam

TOMIN JOY

SOFTWARE DEVELOPER

PROFESSIONAL SUMMARY

I am a dedicated fourth-year Computer Science and Engineering student at St. Joseph's College of Engineering and Technology, poised to launch my career as a software and web developer. With a strong foundation in computer science principles and hands-on experience in web and mobile app development, I am well-equipped to excel in this role.

EXPERIENCE

- June 2023 - Now

Webmaster

IEEE SB SJCET / India, Kerala

-
- June 2022 - June 2023

Web developer

IEEE SB SJCET / India, Kerala

-
- February 2022 - March 2023

Technical Lead

TinkerHub SJCET / India, Kerala

-
- February 2021 - February 2022

Python Lead

TinkerHub SJCET / India, Kerala

INTERNSHIPS

- April 2022 - July 2022

Digital Skills Facilitator

Tinkerhub Foundation / India, Kerala