

## Akash NP

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### Education:

Name	Grade	Board	Year of Graduation	Score
National Public School Rajajinagar – Blore	10 <sup>th</sup>	AUTONOMOUS (Affiliated to CBSE)	2014	8.6 CGPA
VVS Sardar Patel PUC Rajajinagar – Blore	12 <sup>th</sup>	Karnataka State Board	2016	86.7% (PCE - 93% )
RV College of Engineering Bangalore	Electronics and Communicatio n Engineering	AUTONOMOUS (Affiliated to VTU)	2020	6.4 CGPA

### Professional Work Experience:

-From July'20 onwards working in Hebbale Labs as a Software Development Intern.

-Started as a **Junior Software Developer in Hebbale Labs from November 2020.**

- Worked with the database and backend development of the web application of a Silicon Valley startup called **YellowTin**, it is a cloud-based, data-driven platform that educates and empowers people to make informed decisions, so that they can switch to cost-effective, electricity-based solutions at their own pace.
- Did a research project based on **Blockchain** technology to understand blockchain with various use cases. Did an implementation, leveraging blockchain advantages to a bank use case using **solidity smart contracts** and linking them to a user friendly reactive front end.
- Performed front-end tasks for a COVID contact-tracing website/app using **next.js and typescript** from inception in making the website dynamic and reactive for the **AppCensus** team. It is a product which focuses on consumer data privacy, security and networking.

## PROJECTS CARRIED OUT

### 1. Design and Analysis of a Conceptual Air Breathing Hypersonic Vehicle – Jan 2020 to June 2020.

- Project carried out at Indian Institute of Science (IISc) Bangalore in the department of Aerospace Engineering at the Center of Excellence in Hypersonics for a duration of 6 months from January 2020 to June 2020.
- The trim conditions of the hypersonic aircraft were determined using 6-Dof equations of motions.

- Newton's Iterative method was used to find the trim points for a winged cone hypersonic vehicle which involves a Jacobian calculation.
- This project is published in a technical paper in the journal IRJMST (International Research Journal of Management Science and Technology)

## 2. Simulation of AFDX- Avionics Full Duplex Switched Ethernet on LabVIEW

- Simulated the AFDX network protocol which is used in modern commercial aircraft's like B787 and A380.
- Three modes of operation were implemented which are the normal communication, paused communication and message priority communication.

## 3. Simulation of a basic Fly-By-Wire on SIMULINK

- Developed a simulation in MATLAB to implement a basic Fly-By-Wire which has wide range of applications in the Aerospace Industry.
- Implemented a low fidelity autopilot system for small aircraft's using control system toolbox.

## 4. Semi- Autonomous driving vehicle

- Developed a hardware model to sense the alertness of the driver and make the vehicle autonomous based on the drivers condition.
- Used IR sensors to detect eye moment and alertness of the driver, ultrasonic sensors to detect obstacles for the vehicles which were strategically placed in blind spots.
- Arduino Nano was used to process the sensor information and make appropriate decisions.

## TECHNICAL SKILLS

### Programming Languages:

- C
- C++
- JAVA
- Javascript
- Typescript

### Frameworks and libraries used:

- Angular
- React.js
- Next.js

### Database Familiarity

- NoSQL - MongoDB
- SQL - PostgreSQL, PgAdmin

## Software's Used:

Basics of Matlab , Verilog HDL , Packet Tracer , Cadence ,TINA,.

## Certifications:

- Blockchain Essentials from IBM Developer Skills Network.

## EXTRA-CURRICULAR AND HOBBIES

### 1. Core team in TED<sup>x</sup> RVCE

- Worked with a team of students to organize events in the year 2018 and 2019.
- Invited speakers from various walks of life including filmmakers, artists, technical experts, travelers and fitness professionals to share their experiences and stories.

### 2. Senior Associate at 8<sup>th</sup> Mile RVCE

- Led a team to acquire funds to organize the techno cultural fest in the year 2019 and 2017.
- Managed responsibilities like security, hospitality and event coordination.

### 3. Running

- Ran multiple 10km marathons in the past few years.
- Built up stamina and endurance to run 10km in less than 55min.

### 4. Fitness and Wellness

- Doing strength training and resistance training from the past 2 years.

### 5. Speed cubing

- Able to solve a 3\*3, 4\*4, 5\*5, 6\*6, 7\*7, mirror cube
- Best time for 3\*3 is 22.5sec and average time is 26.2seconds