AISHWARYA HAVAL
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CARREER OBJECTIVES:

I want to be a successful Software Engineer working on latest technology and I am looking for a challenging and responsible opportunity, explore strengths potentials and continually develop my technical skills in the field of embedded systems and make our company successful.

EDUCATION:

	Course	Specialization	Institute	University/ Board	Year of passing	Aggregate
1	Bachelor Of Engineering	ECE	S.G Balekundri Institute of Technology Belagavi.	VTU	2019	62.93%
2	PUC	PCMB	R.L PU science college, Belagavi.	Department of Pre-University Education	2015	67.16%
3	S.S.LC	-	Maratha Mandal English Medium High School, Belagavi	Karnataka Secondary education Examination board	2013	75.84%

TECHNICAL SKILLS:

Programming Languages	○ Advanced C programming ○ OOP using C++ ○ Data-structures
System programming	○ Linux Kernel system calls ○ IPC mechanisms – Pipe, FIFO, Shared memory ○ Threads – Multi programming
Embedded Controllers	○ Hands-on working with GPIOs, Analog I/Os, Memory usage, interfacing, character LCD ○ Peripherals usage - Timers, Counters and Interrupts ○ Communication protocols - UART, SPI, I2C etc
Embedded Platforms	○ Distributions - Linux (Fedora / Ubuntu) ○ PIC (16F877A) board

WORK EXPERIENCE:

- Currently underwent hands-on technical training program – **Advanced Embedded Systems Course** at Emertxe Information Technologies (http://www.emertxe.com), Bangalore
- This course is Government of India certified program, aligned with **Skill India** / NSDC under Electronics Sector Skill Council of India (http://www.essc-india.org) - **Embedded Software Engineer QP ELE /Q1501**

PROJECTS:

Project Number:1	
Title	**Image Steganography using LSB Encoding and Decoding**
Project brief	The objective was to send a secret text file encoded inside an image of bmp file format. Encoded the length of the secret text and then encoded the data into the LSB of the image bytes. The decoding process involves decoding the length and then decoding the text bit by bit. The final output is the secret text after decoding.
Technologies used	Embedded C – File operations, Pointers, Bitwise operations, Functions, Makefiles, Command line arguments
Key challenges & Learnings	✓ Understanding of pixels and header of image file by doing literature study ✓ Transforming the embedded information to the destination without changing properties of original image ✓ Faced challenges while doing bitwise manipulation of data to embed as well to retrieve the data from the destination image which was solved by self-understanding

Project Number:2	
Title	**Car Black Box**
Project brief	The main objective is to log all the critical events like gear shifts with current speed, the engine temperature, fuel consumption per trip, trip distance etc. The system will provide password based access to the transport managers to view or download the log to PC if required. So its easy to keep track of how the vehicle is being used, handled and control the efficiency of the vehicle.
Technologies used	C-programming, PIC16F877A Microcontroller

Project Number:3	
Title	**InvertedSearch**
Project brief	An inverted index is an index data structures storing a mapping from context, such as words or numbers, to its location in a database file, or

	in a document or a set of documents. The purpose of an inverted index is to allow fast full text searches, at a cost of increased processing when a document is added to the database. The inverted file may be the database file itself, rather than its index. It is the most popular data structure used in document retrieval systems, used on a large scale for example in search engines.
Technologies used	Data Structures – sorted Linked List or Hashing (Indexing), Querying.
Key challenges & Learnings	✓ Understanding the implementation of Hashing or sorted LinkedList or Binary Search tree at the time of Indexing. ✓ While indexing, before storing, comparing and arranging the words in sorting order. ✓ Learned about efficiency can be increased by Hashing, which stores words based on unique indices.

ACADEMIC PROJECT:

Project Number:4	
Title	**Robotic Arm Mimicking Miniature Arm in a REAL TIME system.**
Project brief	A robot is an intelligent embedded machine which is employed to carry out the task are monotonous or that are unsafe for human intervention. Robotic arm is a programmable mechanical arm which can execute the functions of a human arm. The end effector can perform various tasks such as pick, place, welding, drilling, painting, watering etc.
Technologies used	Python programming
Key challenges & Learnings	✓ Knowing about arduino boards like arduino uno, nano & mega etc ✓ Difference between dc, servo, & stepper motor. ✓ Knowing about about different communication mediums like Bluetooh, wifi, RF, & Iot.

INTERNSHIP PROJECT:

Project Number:5	
Title	**Live Project on Python**
Project brief	Maintaining attendance is very important in all learning institutes for checking the performance of students. In this project, we propose the design and use of a face detection and recognition system to automatically detect students attending a lecture in a classroom and mark their attendance by recognizing their faces. Face recognition is a biometric technique which involves determining if the image of the face of any given person matches any of the face images stored in a database. Face Recognition is natural, easy to use and does not require aid from the test subject.
Technologies used	Face Recognition
Key challenges & Learnings	✓ To capture a picture and discern all the faces in it. ✓ Concentrate on one face at a time and understand that even if a face is turned in strange direction or in bad lighting, it is still the same person.

	✓ Determine various unique features of the face that can help in distinguishing it from the face of any other person. These characteristics could be the size eyes, nose, length of face, skin colour, etc. ✓ Compare these distinctive features of that face to all the faces of people we already know to find out the person's name.

CERTIFICATIONS AND IN-PLANT TRAININGS:

- Workshop on Processors & Peripherals-PIC-18 Microcontroller by MICROCHIP Apsis solutions Bangalore.
- Workshop on Iot(Internet of things) by Apsis solutions.

CONTRIBUTIONS AND ACHEIVEMENTS:

- Presented paper on Medical Mirror.
- District level Chess winner

PERSONAL DETAILS:

- **Name** : Aishwarya Ekanath Haval
- **DOB** : 1st January 1996
- **Nationality** : Indian
- **Languages** : English, Hindi, Kannada, Marathi.
- **Interests** : Painting, Planting, chess etc.