Bapuji Educational Association (Regd.)
Bapuji Institute of Engineering & Technology, Davangere.
Department of Computer Science and Engg.
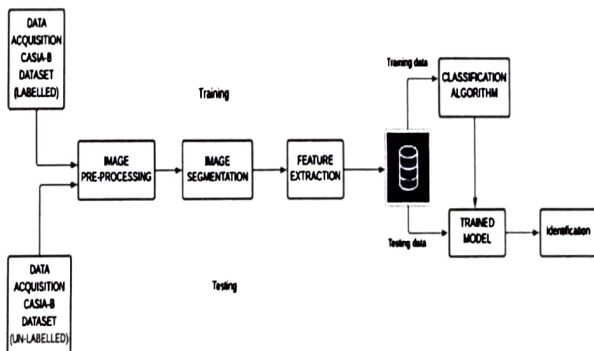
Funding Agency	Year	Principal Investigator	Title of the Project Proposal	Amount Sanctioned
Institute Project Funding Scheme	2020-2021	Naseer R	AI Based GAIT recognition for Biometric Surveillance	5500.00
		Dr. Roopa G M	Face Sketch Recognition using Computer Vision	5000.00
	2019-2020	Dr. Nirmala C. R	Tourists recommendation system using machine learning techniques	5000.00
	2018- 2019	Dr. Pradeep N	Identification of Personal traits using signatures	5000/-
		Dr. Nirmala C. R	Line and Character segmentation of Brahmi Scripts	5000/-

Institute Sponsored Student Project Proposal
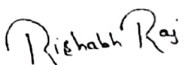
1.	Academic Year:	2020 - 21	
2.	Semester:	8	
3.	Name of the College:	Bapuji Institute of Engineering and Technology	
4.	Branch:	Computer Science and Engineering	
5.	Project Title:	AI Based Gait Recognition for Biometric Surveillance	
6.	Project Discipline:	Machine Learning	
7.	Principal	Name:	Dr. H B Aravind
		Contact No.:	08192220938
		Email id:	principal@bietdvg.edu
8.	HOD	Name:	Dr. Nirmala C.R.
		Contact No.:	9740770377
		Email id:	nirmala.cr@gmail.com
9.	Project Guide	Name:	Prof. Naseer R
		Contact No.:	9964057136
		Email id:	nasiryr@gmail.com
10.	Project Coordinator	Name:	Dr. Roopa G M
		Contact No.:	8123888668
		Email id:	Roopa.rgm@gmail.com

11.	Name of Project Group Members	
	1. Group leader and Member	
	Name: Anil Kaundal	
	USN No.: 4BD17CS010	
	Contact No: 7814406530	
	Email id: anilkaundal1999@gmail.com	
	2. Member	
	Name: Rishabh Raj	
	USN No.: 4BD17CS092	
	Contact No: 7070465469	
	Email id: rishabhraj1310@gmail.com	
	3. Member	
	Name: Rishi Pradeep Sharma	
	USN No. : 4BD17CS093	
	Contact No:9137269175	
	Email id:sharmarishi519.rs@gmail.com	
	4. Member	
	Name: Aman	
	USN No.: 4BD17CS006	
	Contact No: 9304338018	
	Email id: amananand2751@gmail.com	
12.	Scope / Objectives of the project:	a. To apply suitable pre-processing and segmentation techniques on the collected dataset. b. To identify prominent features and extracting them for further processing. c. To develop a model that will recognize the subject.
13.	Methodology of work: (Including diagram, flow chart and design calculations)	

14.	Expected outcome of the Project	A GUI having two divisions in which one is displaying the video input and another one displaying transformed silhouettes. Also it has buttons which has different functionality, such as: - adding new subject, training the model with new subject and compare.
15.	Application Of the Project	The main application of this project is to make a robust Biometric Surveillance system .
16.	Budget Details with Material Required	1. Report Printing and Binding: Rs. 1000/- 2. Online Web service: Rs. 2000/- 3. Hardware components: Rs. 2000/- 4. Miscellaneous: Rs. 500/- **Total Amount: Rs. 5500/-**
17.	Date of commencement of the Project	06-01-2021
18.	Probable date of completion of the project	05-07-2021
19.	Duration of project work	6 months
20.	Pert chart for completion of the project in said duration as per planned activities:	

Pert chart for completion of the project in said duration as per planned activities:

SI .No	Activities Planned	1Month	2Month / Week	3Month /Week	4Month / Week	5Month /Week	6Month / Week
01	Literature review	■					
02	Planning/ Designing		■				
03	Assembly/ Fabrication Work			■			
04	Final Testing						
05	Result& Calculation/ Conclusion						
06	Preparation Of Report & Submission						■

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. If any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

SL. No.	Name of the Student	Student Signature
01.	Anil Kaundal	
02.	Rishabh Raj	Rishabh Raj
03.	Rishi Pradeep Sharma	
04.	Aman	

Web Site : www.bietdvg.com
E-mail (Principal) : principal@bietdvg.edu
E-mail (Director) : director@bietdvg.edu

Office : 08192 - 221461
Director : 08192 - 222245
Fax : 08192 - 223261
Resi. : 08192 - 221578
Principal : 08192 - 220938
Fax : 08192 - 222016
Resi. : 08192 - 226355

Bapuji Educational Association (Regd.)

Bapuji Institute of Engineering & Technology

Post Box No. 325, **DAVANGERE - 577 004.** Karnataka - India

Year of Establishment - 1979

(Affiliated to Visvesvaraya Technological University and Approved by AICTE, New Delhi)

Accredited by N.B.A., New Delhi and The Institution of Engineers (I), Kolkata.

ಬಾಪೂಜಿ ಇಂಜಿನಿಯರಿಂಗ್ ಮತ್ತು ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ, ದಾವಣಗೆರೆ – 577 004.
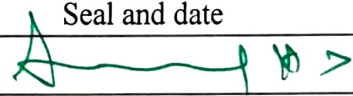
Ref. No. : BIET/ CS/560/2021-22   Date 08/7/2021

ENDORSEMENT

This is to certify that:

1. Anil Kaundal (4BD17CS010)
2. Rishab Raj (4BD17CS092)
3. Rishi Pradeep Sharma (4BD17CS093)
4. Aman (4BD17CS006)

Are bonafide students of Department of Computer Science and Engineering of our institution. If the project proposal submitted by these students under Institute Sponsored Student Project Proposal is selected by Institute, we will provide the required laboratory / Computer / infrastructure support in our college/ Institution . Further we also take necessary steps that the project group will exhibit / demonstrate their project in exhibition at BIET, Davangere. If the student group fails to attend the evaluation in the Institute, the supported project amount will not be issued.

Sig nature of Project Guide with date	Sig nature of HOD with Seal and date	Sig nature of the Principal with Seal and date
Name: Prof. Naseer R	Name: Dr. Nirmala C R	Name: Dr. H. B. Aravinda

Dr. Nirmala C R
M.Tech.(CS&E), Ph.D.,
Professor and Head
Dept. of Computer Science & Engineering
Bapuji Institute of Engineering & Technology
DAVANGERE-577004. (Karnataka-India)

PRINCIPAL
Bapuji Institute of Engg. & Technology
DAVANGERE-577004

	Bapuji Educational Association (Regd.) Bapuji Institute of Engineering & technology Department of Computer Science & Engineering, Davangere-577004.	

Institute Sponsored Student Project Proposal

1.	Academic Year:	2020-21	
2.	Semester:	8th Semester	
3.	Name of the College:	Bapuji Institute of Engineering and Technology	
4.	Branch:	Computer Science and Engineering	
5.	Project Title:	Face Sketch Recognition using Computer Vision	
6.	Project Discipline:	Cyber Security	
7.	Principal	Name:	Dr. H B Aravind
		Contact No.:	9844061789
		Email id:	principal@bietdvg.edu
8.	HOD	Name:	Dr. Nirmala C R
		Contact No.:	9740770377
		Email id:	nirmala.cr@gmail.com
9.	Project Guide	Name:	Dr. Roopa G M
		Contact No.:	8123888668
		Email id:	roopa.rgm@gmail.com
10.	Project Co-Guide	Name:	
		Contact No.:	
		Email id:	
11.	Project Coordinator	Name:	
		Contact No.:	
		Email id:	

12.	Name of Project Group Members	
	1. Group leader and Member	
	Name: **NIDHI S JAIN**	
	USN No: **4BD17CS121**	
	Contact No: **9148354550**	
	Email id: **jainnidhi107@gmail.com**	
	2. Member	
	Name: **YEMIMAH ANGEL MD**	
	USN No.: **4BD17CS119**	
	Contact No: **9880173233**	
	Email id: **yemi3903@gmail.com**	
	3. Member	
	Name: **K S MEGHANA**	
	USN No: **4BD17CS049**	
	Contact No: **9113055542**	
	Email id: **ksmeghana99@gmail.com**	
	4. Member	
	Name: **NEHA PAWAR KR**	
	USN No.: **4BD17CS120**	
	Contact No: **8217877228**	
	Email id: **nehapawar2699@gmail.com**	
13.	Scope / Objectives of the project:	The main goal of this project is to come up with the solution which will leverage the power of deep learning image classification behind the scenes and help in recognizing the criminal's face accurately with the following functionalities: 1. To develop a model to predict a face-sketch of a criminal with high accuracy. 2. To apply supervised machine learning method to the model to achieve precise matching.

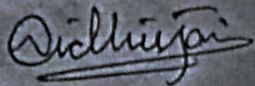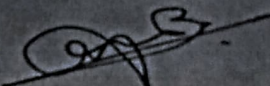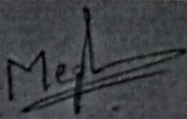| 14. | Methodology of work: (Including diagram, flow chart and design calculations) | The proposed face sketch recognition approach has four main modules for image acquisition, module for extraction of features, module for training classifier database, and module for classification. Initially, the face datasets are collected by the image acquisition module.

Then, a series of salient features are extracted by applying feature extraction module. These facial features are used to analyze face landmarks which represent human identity information. In the next process, the classifier is trained for recognizing the face. In the last module, the system recognizes face image and fetch information about the person from the database.
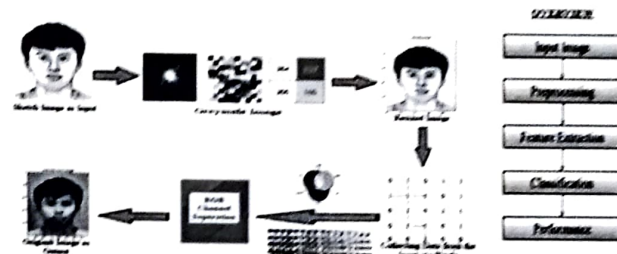
Model Design

The six stages are:
• Data gathering of face images of subjects.
• Pre-processing of face images i.e., copping, grayscale conversion.
• Feature extraction of the sketch image using Pattern Based Algorithm.
• Discrete Cosine Transform (2D - DCT) image compression of face image classes.
• Training the sketch images from the mugshot dataset using SVM, a supervised Machine Learning Algorithm.
• Testing and validation of the program and technique.
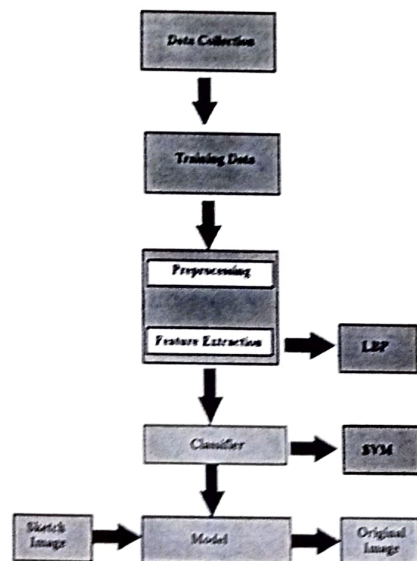
Fig 4.1: Flow Diagram |

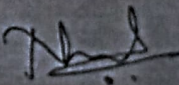|		
15.	Expected outcome of the Project	The project focuses on developing a technique that provides a solution for an efficient face sketch identification system in forensic applications. The digital image mug-shot is considered to be used as an original face image and the corresponding sketches of different faces is considered to be drawn by a forensic artist. Here some specific facial geometric feature which could be used to calculate some ratio of similarities from the template photograph database against the forensic sketch.
16.	Application of the Project	Face recognition is commonly used in applications such as human-machine interfaces, automatic access control systems and forensic investigations etc. which involves comparing a face image with a database of stored faces in order to identify the face in the image. Forensic sketches play an important role in criminal identification process. These sketches are drawn by forensic artists on the basis of the description provided by an eyewitness or victim. These sketches are publicized to get some clues to reveal the identity of the criminals. A faster way to identify the criminals is to match the forensic sketch with some mug-shot database. In the process of drawing a sketch, the description provided by the eyewitness often includes some unique facial details comprising the deviations from an average face. This project involves the design and development of a face sketch identification system.
17.	Budget Details with Material Required	

Budget	Amount
a) Materials	1500.00
b) Tools	1000.00
c) Travel	1000.00
d) Report	1000.00
e) Miscellaneous	500.00
Total	5000.00

18.	commencement date of the Project	January 2021
19.	Probable date of completion of the project	July2021
20.	Duration of project work	7 Months
21.	Pert chart for completion of the project in said duration as per planned activities	

SI. No	Activities Planned	1 Month	2 Month / Week	3 Month / Week	4 Month /Week	5 Month / Week	6 Month /Week
01	Literature review	███					
02	Planning/ Designing		███				
03	Assembly/ Fabrication Work			███			
04	Final Testing						
05	Result& Calculation/ Conclusion						
06	Preparation Of Report & Submission						███

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. If any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

SL. No.	Name of the Student	Student Signature
1.	NIDHI S JAIN	
2.	YEMIMAH ANGEL MD	
3.	K S MEGHANA	
4.	NEHA PAWAR KR	

Bapuji Institute of Engineering & Technology

Post Box No. 325, DAVANGERE - 577 004. Karnataka - India
Year of Establishment - 1979
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Accredited by N.B.A., New Delhi and The Institution of Engineers (I), Kolkata.

ಬಾಪೂಜಿ ಇಂಜಿನಿಯರಿಂಗ್ ಮತ್ತು ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ, ದಾವಣಗೆರೆ – 577 004.

Ref. No. : BIET/ CS/SEO /2021 -22   Date 08/7/2021

ENDORSEMENT

This is to certify that:

1. K S Meghana (4BD17CS049)
2. Yemimah Angel M D (4BD17CS119)
3. Neha Pawar K R(4BD17CS120)
4. Nidhi S Jain (4BD17CS121)

Are bonafide students of Department of Computer Science and Engineering of our institution. If the project proposal submitted by these students under Institute Sponsored Student Project Proposal is selected by Institute, we will provide the required laboratory / Computer / infrastructure support in our college/ Institution . Further we also take necessary steps that the project group will exhibit / demonstrate their project in exhibition at BIET, Davangere. If the student group fails to attend the evaluation in the Institute, the supported project amount will not be issued.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
Name: Dr. Roopa G M	Name: Dr. Nirmala C R	Name: Dr. H. B. Aravinda

Dr. Nirmala C R
M.Tech.(CS&E), Ph.D.,
Professor and Head
Dept. of Computer Science & Engineering,
Bapuji Institute of Engineering & Technology
DAVANGERE-577004. (Karnataka-India)

PRINCIPAL
Bapuji Institute of Engg. & Technology
DAVANGERE-577004

Bapuji Education Association ®
Bapuji Institute of Engineering &Technology
Research and Development Cell
Davangere-577004

To,   Date: 9/04/2019
Professor & Head
Department of Computer Science & Engineering
Bapuji Institute of Engineering and Technology
Shamnanur Road,
Davangere -577004

Dear Sir/Madam,

Sub: Sanction of Student Project from the institute for the year 2018-19

Reference: Project Proposal titled:**"Tourist Recommendation System using Machine Learning Techniques"**

I am happy to inform that your project proposal referred above, has been recommended by the Projects Evaluation Committee of BIET and approved by the Principal under student project scheme. Budgetary break-up as detailed below.

Students	Dev Manu Akshay Hiremath Arshiya A Aditi Singh	Budget	Amount
		Materials/consumables	
Guide/s	Dr. Nirmala C R	Travel and Report Preparation	6000/-
Department	Computer Science and Engineering	Miscellaneous	
Rupees Six thousand only		Total	6000/-

The following are the guidelines to carry out the project work:

a) The project should be performed based on the objectives of the proposal presented.
b) The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.doc and .pdf format) should be submitted to the head of the department concerned / Dean R and D.

The sanctioned amount can be collected from the institute by submitting proper bills of expenditure, duly signed by Head of the department and Principal.

Yours sincerely,

Dean R&D   **Director**   **Principal**

BIET|R4D|72|2019-20

Date: 9/04/2019

To,
Professor & Head
Department of Computer Science & Engineering
Bapuji Institute of Engineering and Technology
Shamnanur Road,
Davangere -577004

Dear Sir/Madam,

Sub: Sanction of Student Project from the institute for the year 2018-19

Reference: Project Proposal titled:**"Identification of Personal Traits using Signatures"**

I am happy to inform that your project proposal referred above, has been recommended by the Projects Evaluation Committee of BIET and approved by the Principal under student project scheme. Budgetary break-up as detailed below.

Students	NadiraKhanum Vaibhavi N V Sadvini S L Puja Kumari	Budget	Amount
		Materials/consumables	
Guide/s	Dr. Pradeep N	Travel and Report Preparation	6000/-
Department	Computer Science and Engineering	Miscellaneous	
Rupees Six thousand only		Total	6000/-

The following are the guidelines to carry out the project work:

a) The project should be performed based on the objectives of the proposal presented.
b) The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.doc and .pdf format) should be submitted to the head of the department concerned / Dean R and D.

The sanctioned amount can be collected from the institute by submitting proper bills of expenditure, duly signed by Head of the department and Principal.

Yours sincerely,

Dean R&D   **Director**   **Principal**