

Gourav SIDDHAD

Research Scholar | Computer Science | IIT Roorkee

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Indore, Madhya Pradesh, India



Research Interest : [Brain-Computer Interface \(BCI\)](#) [Electroencephalography \(EEG\)](#) [Cancelable Biometrics](#) [Deep Learning](#) [Image Processing](#)

EDUCATIONAL QUALIFICATIONS

Present August 2020	Ph.D., INDIAN INSTITUTE OF TECHNOLOGY, Roorkee <ul style="list-style-type: none">> Computer Science 8.57/10> Research Area - Brain-Computer Interface, EEG BCI Deep Learning EEG Image Processing Python
August 2020 July 2018	M.Tech., PDPM INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, Jabalpur <ul style="list-style-type: none">> Computer Science 8.3/10 CPI> IIITDMJ Proficiency Prize (Silver Medal for the Best Thesis among PG Students of CSE) Cancelable Biometrics Deep Learning Image Processing Python
May 2017 July 2013	B.Tech., HANSRAJ COLLEGE, University of Delhi, Delhi <ul style="list-style-type: none">> Computer Science 69.02 % C++ Java Android
April 2013 July 2012	AISSCE, CBSE, EMERALD HEIGHTS INTERNATIONAL SCHOOL, Indore <ul style="list-style-type: none">> PCM + CS 91.4 %> Certificate of Excellence (Best in Computer Science) C C++
April 2011 July 2010	AISSSE, CBSE, EMERALD HEIGHTS INTERNATIONAL SCHOOL, Indore <ul style="list-style-type: none">> 8.8/10 CGPA

DOCTORAL DISSERTATION

BRAIN-COMPUTER INTERFACE

AUGUST 2020 - PRESENT

IIT Roorkee

The dissertation being carried out is based on Human Behavior Estimation on EEG data using machine learning based methods. The work also includes rigorous analysis of the methods formulated and implementation of state-of-the-art work done in the field. This work is done under the guidance of Dr. Partha Pratim Roy (Associate Professor, IIT Roorkee).

[BCI](#) [EEG](#) [Deep Learning](#)

MASTER'S DISSERTATION

CANCELABLE BIOMETRIC TEMPLATES FOR LOW-END DEVICES

DEC 2018 - AUGUST 2020

PDPM IIITDM Jabalpur

The dissertation carried out is summarized as cancelable biometric template generation for unimodal and multimodal biometric authentication using traditional as well as deep learning based methods for low-end devices. The work also includes rigorous analysis of the cancelable biometric schemes formulated and implementation of state-of-the-art work done in the field. This work is done under the guidance of Dr. Pritee Khanna (Professor, PDPM IIITDM Jabalpur).

[Cancelable Biometrics](#) [Cryptography](#) [Image Processing](#) [Deep Learning](#)

SKILLS

Programming	Python, C++, Java, Android, Matlab
Frameworks	PyTorch, Keras, Tensorflow, EEG-Lab
Development Tools	Visual Studio Code, IntelliJ Idea, Eclipse, git
Operating Systems	Mac OS, Windows, Linux
Other Skills	Raspberry Pi

PUBLICATIONS

- Pre-print, Submitted | [Gourav Siddhad](#), Anmol Gupta, Debi Prosad Dogra, and Partha Pratim Roy, **Efficacy of Transformer Networks for Classification of Raw EEG Data**, arXiv:2202.05170
- Under Review | [Gourav Siddhad](#) and Pritee Khanna, **Max-Min Threshold based Cancelable Biometric Templates for Low-end Devices**
- Under Review | Pankaj Bamoriya, [Gourav Siddhad](#), Harkeerat Kaur, Pritee Khanna, and Aparajita Ojha, **DSB-GAN: Generation of Deep Learning based Synthetic Biometric Data**
- Accepted | Pankaj Bamoriya, [Gourav Siddhad](#), Pritee Khanna, and Aparajita Ojha, **Cancelable Template Generation using Convolutional Autoencoder and Randnet**, Computer Vision and Image Processing 2021
- Journal | Anmol Gupta, [Gourav Siddhad](#), Vishal Pandey, Partha Pratim Roy, and Byung-Gyu Kim, **Subject-Specific Cognitive Workload Classification Using EEG-Based Functional Connectivity and Deep Learning**, MDPI Sensors. DOI: 10.3390/s21206710
- Conference | [Gourav Siddhad](#), Pritee Khanna, and Aparajita Ojha, **Cancelable Biometric Template Generation Using Convolutional Autoencoder**, Computer Vision and Image Processing 2020. DOI: 10.1007/978-981-16-1086-8_27

PROJECTS

- December 2020 | **Stereo Vision: Stereo Vision using Dynamic Programming**, IIT, Roorkee
August 2020 | [Dynamic Programming](#) [Python](#) [Stereo Vision](#)
- March 2020 | **PERBI: Privacy Enhancing Revocable Biometric Identities**, PDPM IIITDM, Jabalpur
December 2018 | [Python](#) [Cancelable Biometrics](#) [Cryptography](#) [Raspberry Pi](#)
- December 2019 | **BW2RGB: Gray to Color Image Conversion**, PDPM IIITDM, Jabalpur
July 2019 | [Neural Networks](#) [Keras](#) [Python](#) [Multimedia Processing](#)
- April 2019 | **HiDDeN: Hiding Data with Deep Networks**, PDPM IIITDM, Jabalpur
January 2019 | [Data Hiding](#) [Deep Learning](#) [Keras](#) [Python](#)
- April 2019 | **Text Classification**, PDPM IIITDM, Jabalpur
January 2019 | [Machine Learning](#) [Deep Learning](#) [Natural Language Processing](#) [Keras](#) [Python](#)
- November 2018 | **Single Underwater Image Enhancement**, PDPM IIITDM, Jabalpur
August 2018 | [Image Processing](#) [Matlab](#)
- April 2017 | **Home of Recipes**, HANSRAJ COLLEGE, UNIVERSITY OF DELHI, Delhi
January 2017 | [Android App](#) [Java](#)
- November 2016 | **Buzfinder**, HANSRAJ COLLEGE, UNIVERSITY OF DELHI, Delhi
July 2016 | [Android App](#) [Java](#) [Google Maps API](#)
- March 2016 | **Exam Paper Generator**, HANSRAJ COLLEGE, UNIVERSITY OF DELHI, Delhi
January 2016 | [Software Engineering](#)
- March 2013 | **Final Destination**, EMERALD HEIGHTS INTERNATIONAL SCHOOL, Indore
January 2013 | [Turbo C++](#) [C/C++ Graphics](#)

EXPERIENCE

- Present | **Teaching Assistant, IIT, Roorkee**
August 2020 | [Compiler](#) [SQL](#)
- March 2022 | **Teaching Assistant, TIMES TSW AND IIT ROORKEE, Roorkee**
December 2021 | Certificate Program in Machine Learning (CPML)
[Machine Learning](#)
- July 2020 | **Teaching Assistant, PDPM IIITDM, Jabalpur**
July 2018 | [Algorithms](#) [C](#) [Data Structures](#) [DBMS](#) [HTML](#) [Java](#) [SQL](#)
- March 2018 | **Trainer, INFOZONE INFORMATICS, Indore**
January 2018 | Taught Students
> Programming fundamentals and OOP concepts
> Microsoft Office
[C](#) [C++](#) [Java](#) [MS-Office](#)

CERTIFICATIONS

- February 2018 GATE | Score - 513 | AIR - 3605
- February 2017 GATE | Score - 324 | AIR - 14454
- Mar-May 2009 Honors Diploma in C and C++
- May-July 2005 Honors Diploma in Computer Application

HONORS AND AWARDS

- April 2021 IIITDMJ Proficiency Prize (Silver Medal) during Convocation held at/by PDPM IIITDM Jabalpur for Best Thesis among the Post Graduate students of Computer Science and Engineering Discipline in Graduating class of 2020.
- July 2013 Certificate of Merit by Central Board of Secondary Education for outstanding academic performance and being among the top 0.1 % of successful candidates of AISSCE 2013 in Computer Science

CO-CURRICULAR ACTIVITIES

- July 2012 Certificate of Excellence in Literary Competitions from Emerald Heights International School, for being the member of the winner team in Computer Quiz
- February 2012 Certificate of Excellence in Sports from Emerald Heights International School, for securing gold medal in Judo Competition
- November 2011 Certificate of Excellence in Literary Competitions from Emerald Heights International School, for being the member of the winner team in Computer Quiz
- January 2011 Certificate of Graduation from Madhya Pradesh Judo Federation (Affiliated to Judo Federation of India), for clearing the National Grading exam for 7th Kyu (Orange Senior Belt)

LANGUAGES

English ●●●●○
Hindi ●●●●○

STRENGTHS

- > Determined
- > Exuberant
- > Self Motivated

OUTREACH AND VOLUNTEERING

- June 2020 | Student Senate, PDPM IIITDM, Jabalpur
July 2019 | > Member of the Student Senate
- February 2020 | Volunteer, PDPM IIITDM, Jabalpur
> ISEC 2020 (Innovations in Software Engineering Conference)
- March 2019 | Volunteer, PDPM IIITDM, Jabalpur
> DeW 2019 (Design Workshop)
- July 2012 | Prefect, THE EMERALD HEIGHTS INTERNATIONAL SCHOOL, Indore
April 2013 | > Member of Discipline Team

DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge.

(Gourav Siddhad)

May 9, 2022