

ABHISHEK BABA

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Room No. 752, Boys' Hostel, IIIT
Guwahati,
IT-Park, Bongora-781015, Assam, India

‘Readily spirited and passionate about learning and experiencing new technologies with a focus on making applications user-friendly and available to all.’

EDUCATION

MTech Indian Institute of Information Technology Guwahati, India June 2021
Communication and Signal Processing, ECE
CGPA: 9.56

BTech North Eastern Regional Institute of Science and Technology, India July 2019
Electronics and Communication Engineering
CGPA: 7.43

RESEARCH EXPERIENCE

Master's Project, Indian Institute of Information Technology Guwahati, India 2021
Advisor: Dr Rakesh Biswas

- Project title ‘Photo Core Transform for JPEG XR Image Compression’
- A novel software implementation of forward and inverse photo core transforms for JPEG XR image compression.
- MATLAB

Summer Research Internship Program, Centre for Cognitive Computing 2020
Indian Institute of Information Technology Allahabad, India
Advisor: Dr U.S. Tiwari

- Project title ‘EEG Analysis of a Visual Attention Task Using ICA’
- An 8-week project studying different types of brain signals and analysing them on MATLAB.
- MATLAB, EEG Toolbox

Bachelor's Degree Project, NERIST, India 2019
Advisor: Mr. R.K. Mangang

- Project title ‘Automatic Target Positioning with Computer Vision’
- Real time object identification involving a 6 degree-of-freedom robotic arm, equipped with computer vision using a pair of webcams.
- Arduino, Haar-Cascade Trainer GUI, Python

Bachelor's Degree Completion Internship 2018
Centre for Development of Advanced Computing (C-DAC), Kolkata, India

Advisor: Mr. Joyanta Basu

- Project title ‘Speech Processing and Analysis Using PRAAT and MATLAB’
- A 4-week project getting acquainted with the vastness of signal processing applications in our day-to-day life, specifically to speech processing.
- MATLAB, PRAAT

Bachelor’s Diploma Project, NERIST, India

2017

Advisor: Dr Swanirbhar Majumder

- Project title ‘Arduino Quadcopter’
- Cost effective quadcopter design using Arduino, gyroscope and an accelerometer.
- Arduino

PUBLICATIONS

Conference Papers

- Baba, A., & Biswas, R., ‘Multiplier-less Lifting-based Photo Core Transform for JPEG XR Ultrasound Image Compression’, *IEEE INCET 2021, Belgaum, India*, May 21-23, 2021.
- Baba, A., & Biswas, R., ‘Pipeline Architecture of Forward and Inverse Photo Core Transform for JPEG XR Image Compression’, *IEEE CONIT 2021, Karnataka, India*, June 25-27, 2021.

CERTIFICATIONS

Recent Trends in Learning and Optimization for Communication, Control and Signal Processing

Indian Institute of Information Technology Guwahati, India, 2020

Emerging Trends in VLSI Design and Testing (VDNT 2020)

Indian Institute of Information Technology Guwahati, India, 2020

Xilinx and Mentor Graphics Platform

CoreEL Technologies, Bengaluru, India, 2020

Embedded System (Using AVR)

CETPA INFOTECH PVT. LTD., Noida, 2016

Embedded System (Using 8051)

CETPA INFOTECH PVT. LTD., Roorkee, 2015

PCB & Circuit Design

CETPA INFOTECH PVT. LTD., Roorkee, 2015

COMMUNITY SERVICE

National Cadet Corps

NCC 'C' certificate holder, August 2016, NERIST

Robotics and Innovation Laboratory

Lab coordinator, July 2017-June 2019, NERIST

NERIST All India Students' Association

General Secretary, January 2017-January 2018, NERIST

Students' Union of NERIST

Co-convener, April 2017-April 2018, NERIST

SONABYSS (Cultural Fest of NERIST)

Hospitality and Transportation In charge, July 2017-November 2017, NERIST

SYNERGY (Annual Sports Meet of NERIST)

Sports Secretary, Hostel-Block F, July 2016-June 2017, NERIST

LANGUAGES

Hindi: Native Language

English: Advanced Reading and Writing

COMPUTER SKILLS

Programming: C, C++

Applications: Machine Learning

Platforms: MATLAB, PRAAT, OrCAD and PCB Design

OTHER

Interests

- Running
- Reading novels
- Playing Guitar
- Travelling

Citizenship: Indian