

Arnav Jain

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EDUCATION

National Institute of Technology (NIT), Silchar <i>B.tech in Electronics and Instrumentation Engineering – 8.84 /10</i> Shri. Chhatrapati Shivaji School <i>All India Senior Secondary School Certificate Examination– 82.6 %</i> St. George Hr.Sec. School <i>All India Secondary School Certificate Examination– 95.2 %</i>	<i>Silchar, Assam, India</i> <i>November 2020- Present</i> <i>Indore, Madhya Pradesh, India</i> <i>May 2020</i> <i>Dhar, near Indore, Madhya Pradesh, India</i> <i>May 2018</i>
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WORK EXPERIENCE

Indian Institute of Information Technology, Research Intern, Allahabad, India <ul style="list-style-type: none">Designed Pixel Circuit for AMOLED displays with a-IGZO based TFTs to minimize effect of driving TFT V_{th} variation on I_{OLED}The 6T1C pixel circuit, simulated in Hspice gave maximum current variation of only 0.296% for V_{th} range of [0.35V, 4.35V]Optimizing P_{DISSP} for emission phase, verifying results in Origin and designing the layout in Cadence Spectre Tools/Framework used : Hspice, Origin, Cadence Spectre	<i>January 2023 - present</i>
Marine Research Centre, 3D-software package developing Intern, Pune, India <ul style="list-style-type: none">Factoring depth variations under sea level using AIS data (Automatic Identification System) for ambient noise mapping in IORPerform detailed analysis for 11 oceanic water layers for low frequency noise radiated using PyRAM modelingDeveloped software package for 2D-mapping of Shipping Noise variation levels across Lat-Long in IOR (Indian Ocean Region) Tools/Framework used : Acoustic toolbox, PyRAM, Python , Jupyter Notebook	<i>August 2022-November 2022</i>
DS- Dairy System , API chatbot and android developer as tech team lead, Start-up,Neemuch, India <ul style="list-style-type: none">Developed automated - customer user applications for collecting large data through interception of API system and Respond.ioAPI generated automated customer billing and supplier employment system using ML & MessageBird for easy schedulingWell notified customer query interface for better handling increased the customer count by 100 each month Tools/ Framework used: Respond.io, API, MessageBird, Machine learning, Android development	<i>April 2022 - June 2022</i>

PROJECTS

Testing the stability of a control system- Control system <ul style="list-style-type: none">Developed the insights of finding transfer function, root locus, error approximation, Routh - Hurwitz criterionUsed the results obtained for plotting Nyquist plot of the system and verified the stability graphically	<i>May 2022 - July 2022</i>
Characterization of LVDT with application in Valve Pitch Actuators <ul style="list-style-type: none">Verified the working principle of Linear Variable Differential Transformer with air supply between 40 and 120 psiDetermined parameters like position and displacement using LVDT and compared with values obtained from other sensors	<i>February 2022 - March 2022</i>
Design of two stage Operational Amplifier to obtain 120dB gain - Microelectronics <ul style="list-style-type: none">Concluded that gain of the design is 111dB and optimized design parameters to meet Power and Output swing constraintsPerformed Stability analysis in LTSplice and concluded design with calculation of ICMR, CMRR and PSRR	<i>December 2021- February 2022</i>
Advanced Library Management System C - Language (libraries) <ul style="list-style-type: none">Developed LMS to perform CRUD on library resources using locks to ensure ACID properties of transactionApplication was also designed to register, authenticate and authorize individuals based on user type (STUDENT, STAFF, ADMIN etc)	<i>August 2021 - October 2021</i>

PUBLICATION

Jain, A. (2022) Review to 3D mapping of Low frequency ambient shipping noise, Maritime Research Center website, a research note published on : <ul style="list-style-type: none">Studying all techniques modeled so far, developing complete bookmark to 3D- version of the sound mapping propagating underwater
Review from: Review to 3D mapping of Low frequency ambient shipping noise

TECHNICAL PROFICIENCY

Verilog, C & C++, Python, ML - Algorithms, LTSpice, MATLAB, Simulink, PSIM, LabView

KEY COURSES TAKEN

Digital Design, Control Systems, Circuits and Networks, Microprocessors and Microcontroller Interfacing, Digital Signal Processing, Data Communication, Analog & Digital VLSI Design

POSITION OF RESPONSIBILITY

INSEES, Instrumentation and Electronics Engineering Society, Vice-president, NIT Silchar <ul style="list-style-type: none">Vice-president, managing and organizing core branch society, ALPHA-CRESCENDO 2021, in association with HexNBit, E-tech startup	<i>April 2022 - Present</i>
E-cell, Entrepreneurship cell, Senior associate, NIT Silchar <ul style="list-style-type: none">Core team member at organizing, managing and publicity team for Srijan 2.0&3.0 , in association with Geekforgeeks	<i>June2022 - Present</i>
NCC (National Cadet Corps), Cadet, NIT Silchar <ul style="list-style-type: none">B-certificate holder under 3 Assam battalion, attended Cadre from 16th -23rd of Jan including activities like rifle shooting, mock drills	<i>January 2021 - Present</i>

VOLUNTEER EXPERIENCE

Muskurahat Foundation (NGO), Mumbai - Role: Group funding volunteer Cause : Social Services <ul style="list-style-type: none">Part of the social media handling team and fund collection drive providing education to thousands of children	<i>May 2022-July 2022</i>
Hamari Pehchan NGO, Delhi - Role: Charity drive volunteer Cause : Social Services <ul style="list-style-type: none">Social media posts handling and executing a virtual charity drive for collecting funds through it	<i>June 2022</i>
Gyansagar, NIT Silchar - Role: Media & Content Handler Cause : Social Service <ul style="list-style-type: none">Assisted survey to find Old age homes in localities all over India and getting them recognition through a YouTube program Gyan-samwad	<i>March 2021- January 2022</i>

CO-CURRICULARS

· Musical Instrument - Guitar · Content writing - professional · Sport - football · Graphic designing - Adobe Illustrator