Rohan Chaudhury

Bachelor of Technology
Dept. of Electronics and Communication Engineering
National Institute of Technology Durgapur, **India**
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Education

National Institute of Technology (NIT) Durgapur, India August 2015 - June 2019
Bachelor of Technology in Electronics and Communication Engineering Overall GPA: 9.25/10

St. Xavier's Institution, West Bengal, India 2012-2014
Higher Secondary/+2 (Indian School Certificate) Percentage Obtained: 95.5% (Best 4)

St. Xavier's Institution, West Bengal, India 2010-2012
Secondary (Indian Certificate of Secondary Education) Percentage Obtained: 96.6% (Best 5)

Work and Research Experience

Associate Software Engineer - Qualcomm, Hyderabad, India
*Working in **Artificial Intelligence Software (AISW) CE** team* *Nov 2019 - Present*

- Worked on tensorflow, caffe, pytorch and onnx frameworks.Worked on quantization and optimization of the AI/ML models to run efficiently on mobile devices.

Research Intern - Machine Dynamics Laboratory, NIT Durgapur, India
Guided by Prof. Nirmal Baran Hui (ME), NIT Durgapur &
Prof. Aniruddha Chandra (ECE), NIT Durgapur *July - September 2018*

- Worked on Robot Path Planning in Dynamic Environments with Moving Obstacles and Targets using Reinforcement Learning.

Internship at PricewaterhouseCoopers Pvt. Ltd.
Technology Consultant Intern *May-July 2018*

- Designed an Artificially Intelligent ChatBot which could send and receive data from the HANA Database and display them to the user in real-time. It was deployed in Facebook Messenger Application. Link: Certificate Link

Research Intern - Indian Statistical Institute, Kolkata, India
Guided by Prof. Bhabatosh Chanda (ECSU), ISI Kolkata *August-September 2017*

- Worked on Restoration of Palm Leaf Manuscript Images using Morphological Transformation Techniques in Image Processing.

Research Intern - Jadavpur University, West Bengal, India
Guided by Prof. Amit Konar (ETCE), Jadavpur University *June-July 2017*

- Worked on Robot Path Planning using Particle Swarm Optimization. Certificate Link

Publication

Mahato S, **Chaudhury R**, Kar R, Mandal D, Saha S, **Optimal Integer Order Approximation of Fractional Order Human Ear Simulator**, IEEE Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, ECTI-CON- 2018, Chiang Rai, Thailand. Indexed in SCOPUS and IEEE Xplore Digital Library. Link: IEEE Xplore Link, Google Scholar Account, Certificate Link
This paper showcases the results of my Final Year Project under *Prof. Rajib Kar (ECE, NIT Durgapur).*

Android Applications Developed & Published

- **Play With Augmented Reality (AR):** An Android Application which can play any video in AR over any image that the user wants. Playstore Link, Tutorial Link, Demo Link
- **August AI:** An Artificially Intelligent Chatbot Application which responds to user's texts like a real person. Playstore Link

Youtube Tutorials Developed & Published

- **Fabricated Reinforcement Learning video tutorial series:** The tutorial demonstrates the steps to make an Artificially Intelligent Bot using Reinforcement Learning which can play games. Link: Youtube Link
- **RFID card programming using Raspberry Pi 3 explanation:** The video tutorial explains how to programme RFID Smart card using Raspberry Pi 3 to write and fetch data to and from a server. YouTube Link

Prototypes Developed for Competitions:

- **Smart India Hackathon 2018, India:** Constructed a Prototype Digital stethoscope to analyze cardiac signals in real time during auscultation to reduce the risks of not detecting certain heart anomalies. It was selected for the Grand Finale of Smart India Hackathon, 2018. Link
- **ABU Asia-Pacific Robot Contest (ABU Robocon) 2017** Designed and developed a semi-autonomous robot which was capable of throwing and landing discs at precise locations. Participated in the Asian OceanianCollege robot competition, ABU ROBOCON 2017 as a team representing our college with this robot.

Other Projects

- **Sentiment Analysis using Tensorflow:**Tensorflow was used to analyze positive or negative sentiments in reviews. Github Link
- Worked on **Webscraping** using **Selenium** for Dataset Collection.Code for webscraping a website.
- **Obstacle Avoiding Bots Simulation using Tkinter library of Python:** Simulation of mobile robots which use Potential Field Method to avoid obstacles. Github Link
- **Bluetooth controlled Quadcopter using MultiWii v2.5 SE:** Designed a short-range Quadcopter using MultiWii v2.5 SE which was controlled from an Android device via Bluetooth.
- **Shape Detection using OpenCV library in Python:** Github Link
- **Mobile Robot controlled by a smartphone application via Bluetooth using Arduino Nano:** Relevant codes are available at my Github link: Github Link
- **Home Automation using IoT:** Developed a prototype on Home Automation using Arduino Microcontroller and Wi-Fi module ESP8266 in which the basic electrical appliances of a house can be remotely controlled by an interface in a laptop over the internet.

Online Training Details

- Completed **MIT RES.6-012 Introduction to Probability, Spring 2018** lecture series from **Youtube**
- **Applied AI with Deep Learning** an online course authorized by **IBM** and offered through **Coursera** (Year-2018) Cerificate Link, Badge Link
- **Google Cloud Platform Big Data and Machine Learning Fundamentals** an online course authorized by **Google Cloud** and offered through **Coursera** (Year-2018).Cerificate Link
- **Neural Networks and Deep Learning** an online course authorized by **deeplearning.ai** and offered through **Coursera** (Year-2018).Cerificate Link
- **Machine Learning** an online course authorized by **Stanford University** and offered through **Coursera** (Year-2018).Cerificate Link
- Summer training on **Embedded Systems and Microcontrollers** (Year-2016) from **Pracsol Technologies** Cerificate Link

Technical Skills

Programming Languages	C, C++, Python, Java, Javascript, HTML, CSS, XML
Hardware Description Languages	VERILOG
Cloud Based Platforms	SAP HANA Cockpit, Google Cloud Platform, IBM Watson & IBM Data Science Experience
On-Premise Softwares	MATLAB, ECLIPSE, LaTeX, Android Studio, Sketch-Up, LTspice, Arduino IDE, GNU Octave, Circuit maker
Operating Systems	Windows, Linux(Ubuntu)
Hardwares Used for Robotics	Raspberry Pi 3, Arduino

National Achievements

- **Scholarship for Higher Education:** Received scholarship from St. Xavier's Institution, Kolkata for scoring more than 90% in ICSE and ISC Examinations.
- **Smart India Hackathon 2018:** Our team representing NIT Durgapur qualified for the Grand Finale of Smart India Hackathon 2018.
- **ABU ROBOCON 2017:** I was selected in the team that represented NIT Durgapur in the Asian Oceanian College robot competition, ABU ROBOCON 2017 as a member of the programming and code development team.
- Placed in the Top 10% of National Standard Examination in Physics (2013-2014).

Positions of Responsibility

- Member of **ROBO-CELL of Centre for Cognitive Activities** (the official Robotics club of NIT Durgapur) from 2015 to 2019. We taught our juniors about Machine Learning and Robotics, and also organized and conducted hands-on Robotics workshops.
- Senior Fest Coordinator in **AAROHAN 2017, 2018 & 2019**(Annual Techno-Management Fest of NIT Durgapur).
- Was involved in raising funds for the **Child Care Project of CCWH and RI** and to help suffering children from cancer.