LAKSHAY NANDA

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ACADEMIC QUALIFICATION

Currently pursuing **Bachelor of Technology (in Computer Science Engineering)** from Vellore Institute of Technology, Vellore, slated for completion in May 2020; CGPA (up to Semester VI): 9.23/10

INTERNSHIPS

Intern, PM Control Systems, Faridabad, India (May, 2017 – June, 2017)

- Undertook a project on Control System Programming on MATLAB
- Learnt about standards of MATLAB programming for Control Systems and Electronic governors. This helped me develop optimum codes for the control systems being used in and sold by PM Control Systems.

Design and Machine Learning Mentor, Alfaleus, Vellore (Jan - May 2019)

(VIT-funded start-up; producing devices to detect glaucoma)

- Assisted in developing the algorithm being used in the mobile application
- Created designs for the purpose of publicity and internal circulation, including making the UI/UX of the application and website
- Gained experience of working on industrial projects and learnt in-depth about Machine Learning algorithms with clarity of application in different fields
- Learnt social media marketing

Intern, Bharat Electronics Limited, Ghaziabad, Ministry of Defence, Government of India (May - Jun 2018)

- Undertook a project titled Air Traffic Control System. The primary objective of project was to develop and optimize the existing software that can be utilized by the Indian Air Force to manage air traffic of planes
- Understood the requirements of the government and developed a software that could be used by the Air Traffic Controller to manage both, flights in air and flights that are about to take off
- Learnt the use of JAVA in software development and management

Intern, Global Outreach & Network Error Management, Bharti Airtel, Manesar, Haryana (Apr - May 2018)

- Worked in TAC (Technical Assistance Centre), which looked after all the possible network errors, using four different tools: ECRM (Enterprise Customer Relationship Manager), NMS (Network Management System) and SDH (Synchronous Digital Hierarchy) Technology
- Learnt various ways of troubleshooting the failure in networks
- Worked on Multiplexer (MUX) and Demultiplexer (DEMUX); understood how networks function and the various problems that could be encountered while the network is up and running

INTERNATIONAL EXPOSURE

Student, Summer School, University of Cambridge, United Kingdom (Jun - Jul 2019)

- Attended a course on Machine Learning using MATLAB and Python along with Turing Machine Programming
- Understood how Machine Learning can be implemented using mathematical concepts in MATLAB
- Allotted a project to optimize the 'Travelling Salesman' Problem, along with the course work

NASA Ames Space Settlement contest (May 2014)

- A group of 4 people worked on a project named 'Syena' which was aimed at developing a design for the space settlement which can be utilized in the coming future**.** **(**https://settlement.arc.nasa.gov/Contest/Results/2014/index.html**)**
- Our team won the first prize in Artistic Merit category for our project**.**

ACADEMIC PROJECTS

Faith - An Antidepressant Chatbot (Dec 2018 – Feb 2019)

Team Size: 3

Brief Description: Involved creating a friendly real time interactive chatbot iOS app, which assesses the mood of the user from the phrases used in his sentence. Chatbot also has feature of suggesting songs according to mood, and favorite nearby restaurants according to the user's personal settings.

Individual Role: Prepared the code for iOS application, using SWIFT along with implementation of chatbot in the application Tools Used: Xcode, DialogFlow, libraries like Speech-to-text

Smart Pill Box (Sep – Nov 2018)

Team Size: 2

Brief Description: Project aims at building a smart medicine box that alerts its users, reminding them of the time to take the medicines. The device is designed to help the old people to take their medicines in time. The users of this device get notified through 'thingspeak', in which they can also assess their entire week's activity in the form of charts. The device also alerts its users about the medicine box refill status. Users would get a notification to fill in the box in case it is not.

Individual Role: Implemented the circuit design and prepared the code for Arduino UNO

Tools Used: Arduino UNO, WiFi and GSM modules, IR sensors, buzzers

Doctor Online App (Jul – Sep 2018)
Brief Description: Project is a web application which facilitates easier communication between doctor and patients by allowing the patients to check the availability and make appointments through online portal. It allows patients to choose from available specialists. As it filters the doctors available near the patient it makes it easier for the patient to find hospitals during emergency situations.
Tools Used: HTML, Bootstrap, JavaScript, MySQL

PAPER PUBLICATIONS

- **'Sight for Blind with Panic Button',** will be published in the International Journal of Information Technology, Springer, ISSN: 2511-2104 (Print) 2511-2112 (Online); an embedded system device with image processing and machine learning capabilities made using raspberry pi and Tensorflow to help visually impaired people identify the name of object in audible speech; tools used: Raspberry Pi, Tensorflow, Text-to-Speech, other Hardware sensors (Jun 2019)
  Link: Accepted in International Journal of Information Technology (Springer)- yet to be published
- **Data Encryption Standard Algorithm Using Java Remote Method Invocation & OpenMP, p**ublished in Journal of Advanced Research in Dynamical and Control Systems, Scopus Indexed, ISSN: 1943-023X (Feb 2019)
  Link: http://www.jardcs.org/archivesview.php?volume=1&issue=8&page=9
- **Brain Tumor Segmentation using Fully Convolutional Network,** published in: Journal of Multi Disciplinary Engineering Technologies, Google Scholar, ISSN(P): 0974-1771 (Aug 2018)
  Link: http://www.jmdet.com/wp-content/uploads/2019/02/4jmdet_12_2_4-2.pdf
- **SETI(Search for Extra Terrestrial Intelligence) Signal classification using Machine Learning,** will be published in: IEEE Xplore (September 2019)
  Link: https://ieeexplore.ieee.org/document/8987793

TECHNICAL SKILLS

- Software: Adobe – Photoshop, Illustrator, After Effects, Premier Pro
- Languages: C, C++, Python, SQL, jQuery, JSON, JavaScript, HTML, CSS, MATLAB

CERTIFICATIONS

- Neural Network and Deep Learning, Deeplearning.ai, Coursera (Feb 2019)
- Introduction to the Internet of Things and Embedded Systems, University of California Irvine, Coursera (Sep 2018)
- Fundamentals of Digital Image and Video Processing, Northwestern University, Coursera (Sep 2018)
- Fundamentals of Network Communication, University of Colorado, Coursera (Mar 2018)

EXTRACURRICULAR ACTIVITIES

- Student Convenor, 'graVITas-2019' techno-management fest, organized by VIT University, Vellore (since Jun 2019)
- Secretary, Rotary Club, Rotary International, New Delhi (since 2014)
- Design Coordinator, 'Riviera - 2019' cultural fest, organized by VIT University, Vellore (Feb 2019)
- Joint Secretary, IEEE Computer Society at VIT University, Vellore (since Dec 2018)
- Design Organizer, All India IEEE Computer Society Students and Young Professionals Congress – 'AICSSYC - 2018' technical conference, organized by Institute of Electrical and Electronics Engineers (IEEE) India Council, at Indian Institute of Technology (IIT), Goa (Oct 2018)
- Co-organizer, 'graVITas - 2018' techno-management fest, organized by VIT University, Vellore (Oct 2018)

COMMUNITY SERVICE

- Volunteer, Community Transformation Project; taught unprivileged children basics of computers at Ryan International School, Rohini, New Delhi (Jan 2015 - Feb 2016)
- Volunteer, Blood-donation camps, with other members, as Secretary of the Interact Club at Ryan International School, Rohini, New Delhi, under Rotary International (Jul 2015)
- Participated in various plantation drives and awareness programs organized by Ryan International School, Rohini, New Delhi, for 'Harit Vasundhra', a dream project of the school founder, organized each year (Jul 2015)
- Participated in various activities like rallies and cleanliness drives in and around Ryan International School, Rohini, New Delhi, under the 'Swachh Bharat Abhiyan' (Clean India Initiative), promoted by the Prime Minister of India, Narendra Modi (Jul 2015)
- Helped the organizing committee, as part of the Student Council, in the Ryan Food Bucket Challenge, an initiative organized by the Ryan Group of Institutions to feed underprivileged children; assisted in collection of grains to serving cooked food (Nov 2014)