

Nithin G R

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EDUCATION

SSN College of Engineering (Autonomous, Affiliated to Anna University) <i>B.E (Electronics and Communication Engineering)</i>	2018-present CGPA : 9.27/10
Modern Higher Senior Secondary School, Chennai - CBSE <i>Class XII (Mathematics, Physics, Chemistry, Computer Science)- Chemistry School Topper</i>	2016 - 2018 <i>Percentage: 96%</i>
Vels Vidyashram, Chennai - CBSE <i>Class X- CBSE Merit Scholar</i>	2014-2016 CGPA: 10/10

RESEARCH EXPERIENCE

MITACS Globalink Research Internship Western University, Ontario, Canada MITACS Globalink Research Intern under Dr. Boyu Wang from the Department of Computer Science, Western University, Ontario, Canada. My research focuses on Domain Adaptation, Domain Generalization techniques for learning Invariant Feature Representations for Sensor-Based Human Activity Recognition.	May 2021 – July 2021*
Solarillion Foundation, Chennai, India <u>Undergraduate Research Assistant</u> Ongoing active research in Machine Learning/Deep learning, Computer Vision and Natural Language Processing. Specific research areas include Video based and Vision-Language problems. Current research focusing on for Sign Language Translation from videos using Temporal Attention and Transformer based architectures.	Jan 2020 - Present
SSN College of Engineering, Chennai, India <u>Undergraduate Research Assistant</u> <u>Guide:</u> Dr. Venkateswaran N (Prof., ECE Dept) Current work focusing on Deep Learning for Image Fusion and Pansharpening for Enhancing Multispectral and Hyperspectral Images in the field of Satellite Remote Sensing.	April 2020 - Present

PROJECTS

Modelling and Predicting On-Time Performance of Flights: Modelled and developed a Two-Stage Pipelined Machine Learning Engine to forecast the Delay Time of Flights. Experimented with linear, tree-based and ensemble classifier and regressor models. Performed dataset preprocessing and merging and oversampling to eliminate imbalance in the dataset. Performed regression testing along with general evaluation of the model with common metrics. (Tools used: Python, Sci-Kit Learn, Pandas and NumPy)
Clickbait Detection using Deep Learning: Built a task-specific model to classify news headlines as clickbait or non-clickbait by adapting the Transformer encoder for classification task. (Tools used: Python and TensorFlow)
Wearable Device Design for Monitoring People with ASD (ongoing,IFP): Conducting a study to measure physiological signals - Pulse Rate, Skin Temperature, Skin Conductivity and Heart Rate - of individuals having Autism Spectrum Disorder (ASD). Future directions involve performing analysis on cloud using Deep Learning on collected data and designing the resource constrained DL architecture for a smart wearable device.

Smart Road Traffic Clearance for Emergency Vehicles – Smart India Hackathon 2020: Proposed an IoT framework for traffic clearance at road signals for ambulances and other emergency vehicles using Google Geolocation APIs, Computer Vision and Edge CNNs. (Tools used: NodeMCU, Arduino, ThinkSpeak and Python)

Restaurant Management System - Vashisht IIITDM Hackathon 2019: Bagged 2nd place in the hackathon. Developed a prototype of a basic Restaurant Management System. (Tools used: Python, Tkinter GUI)

SKILLS AND TOOLS

Core Competencies: CNNs, RNNs, Transformer networks and Attention Mechanisms

Programming Languages: Python, C/C++, Java

Frameworks/Libraries: PyTorch, Tensorflow, OpenCV

Tools: Git, Bash scripting, Arduino

CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

Teaching Assistant, Solarillion Foundation:

Main responsibilities include designing assignments for orientees to the foundation, tracking and reviewing their progress in research and providing technical assistance when required. Other responsibilities include writing detailed weekly reports on research progress of orientees.

Sports – Cricket

Part of the SSN College Cricket Club (2018-Present). Participated in various Inter-Collegiate Tournaments around the city. Represented the Under-14, Under-16 and Under-19 Kancheepuram District Cricket Teams from 2014-2019. Was a part of Under-14 and Under-16 Tamilnadu Cricket Association (TNCA) State Camps for the National Level Tournament conducted by Board of Cricket Control (BCCI) in India in 2014 and 2016.

Sub Event Head, Electronics and Communication – Invente, Jan 2021:

Co-organizing Tech events for Invente, the annual technical fest at SSN College of Engineering.

Contributor – Tech Club, Electronics and Communication Department

Contributed in developing technical content for information sessions and organizing technical events.

Interviewer - Interviewing Committee, Instincts 2019, SSN College of Engineering

Interviewed students and guests for the annual magazine during Instincts 2019. Collaborated with the content creation teams in preparing questions and managing content.

RELEVANT DEGREE AND ONLINE COURSES

Machine Learning	Linear Algebra	Programming in Python
Deep Learning	OOPS and Data Structures-C++	Probability Theory
Digital Signal Processing	Natural Language Processing	Soft Computing Techniques
Speech Technology	System Design for IoT	