

# Siddharth Divi

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## EDUCATION

### Purdue University, West Lafayette, IN

May' 21

Master of Science in Computer Science (Machine Learning, Data Science)

### SSN College of Engineering, Chennai, India

May' 19

Bachelor of Engineering in Computer Science and Engineering (CGPA: 8.79 / 10)

## PROFESSIONAL EXPERIENCE

### Graduate Teaching Assistant, West Lafayette, IN

[Aug' 19 – present]

- Collaborating with the instructor to create course assignments and grading for a grad level course, CS529: Security Analytics

### Part-Time Undergraduate Research & Teaching Assistant, Chennai, India

[Feb' 17/Feb' 18 – Jul' 19]

- Created and collaborated with others to create assignments, and projects.
- Primary areas of research revolved around Data Science, Machine Learning and Algorithms.

## RESEARCH PUBLICATIONS

### DeepTrace: A Generic Framework for Time Series Forecasting

[Jun'19]

- Submitted initially to AAAI 2019, Hawaii, and it has been published at International Work Conference on Artificial Neural Networks (IWANN) 2019, Gran Canaria, Spain.

### Forecasting Food Sales in a Multiplex Using Dynamic Artificial Neural Networks

[Apr'19]

- Published at Computer Vision Conference (CVC) 2019, Las Vegas, USA.

### Convolutional Long Short-Term Memory Neural Networks for Hierarchical Species Prediction

[Sep'18]

- Presented as working notes at Conference and Labs of the Evaluation Forum (CLEF) 2018, held at Avignon, France.

## RESEARCH EXPERIENCE & PROJECTS

### Early Stopping for Human Activity Recognition on Resource Constrained Devices

[Dec'18 – May'19]

- Bringing Machine Learning onto edge devices with a specific emphasis on Activity Recognition.
- Working on the reviews obtained from IEEE MASS 2019.

### Data Augmentation and the Exploration of Transfer Learning in GANs

[Sep'18 – Apr'19]

- Augmenting imbalanced datasets and the exploration of transfer learning with GANs.
- Worked with ACGANs and BAGANs to try to balance datasets that had an imbalance in them.
- Transferred learning between GANs from source domain to target domain.

### Microsoft Summer Research Workshop on Machine Learning on Edge Devices

[Jun'18 – Jul'18]

- Extended two algorithms 'Bonsai' and 'ProtoNN' for regression, on edge devices.
- Won the Microsoft Research Grant 2018.

### Student Behavioral Modelling System

[Jun'17 – Sep'18]

- Acquired various kinds of data pertaining to students of a college to analyze their performance over time.
- Analyzed students' marks, time-table schedules, the distance they travelled to get to college daily, and other such features.
- Derived interesting insights based on the data, used it to make recommendations to the college.

### Breast Cancer Detection System

[Jun'17 – Nov'17]

- Predicting the probability of a person having breast cancer to complement a doctor's diagnosis.
- Made predictions based on the results of the diagnostic tests.
- Built a front end for this system, using Django, and the backend consisted of an ensemble of Machine Learning models.

### DC Motor Closed Loop Speed Control System

[Mar'17 – Jun'17]

- Built a closed loop speed control system for a 12V DC Motor.
- Implemented the logic of a PID controller, on an Arduino Uno.

## SKILLS

- **Programming Languages:** Python, C, C++, SQL, R (acquainted)
- **Frameworks Used:** Keras, Elastic Search (ELK Stack), Tensorflow (basic)
- **Additional Skills:** Linux Server Administration (at Solarillion Foundation)
- **Online Courses:** Machine Learning (Coursera), Deep Learning Specialization (Coursera)
- **Languages:** English (native speaker proficiency), Hindi, Telugu, Tamil, German (Beginner)

## HONORS AND AWARDS

- Recipient of **scholarship** for **academic excellence** in undergraduate college, **2017-2018**.
- Ranked **second** in my **Junior Year** in college, **2017-2018**.
- Received a letter of **commendation** from Union **HRD** Minister for securing the **first place** in school during **AISSCE 2014-2015**.

## AFFILIATIONS

- **Make a Difference (MAD)** [Oct'17 – Apr'19]
- **Solarillion Foundation (SF)** [Feb'17 – Jul'19]