

ABHIJITH RAGAV

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EDUCATION

SRM Institute of Science and Technology

Jul 2016 – Jun 2020

B.Tech in Information Technology

Grade: 88.9%

Courses: Probability, Statistics, Discrete Mathematics, Data Mining, Data Science, Data Structures & Algorithms

EXPERIENCE

Carnegie Mellon University

Jan 2020 – present

Research Intern (Synergy Labs)

Pittsburgh, PA

→ Developing an AppService that interfaces with **BuildingDepot** and **Mites** to host IoT apps in separate LXC containers.

Advisor: Dr. Yuvraj Agarwal

Solarillion Foundation

April 2018 – present

Undergraduate Research & Teaching Assistant, Server Administrator

Chennai, India

→ Proposed a scalable Deep Learning Solution for stress and affect detection on resource-constrained devices.

→ Worked on predicting Movie Lifetime from real world occupancy data in collaboration with a top multiplex in India.

→ Mentored 20+ students in research and open-source, formulated assignments in Python & ML.

→ Wrote bots for auto-grading & verifying assignments, posting office hours, and tracking student status.

Advisor: Mr. Vineeth Vijayaraghavan

IIT Madras

May 2019 – Jul 2019

Machine Learning Intern (RISE Lab)

Chennai, India

→ Ported Tensorflow Lite bare metal on the Risc-V **Shakthi** E-Class microprocessor.

Advisor: Dr. V. Kamakoti

PUBLICATIONS

1. **Bayesian Active Learning for Wearable Stress and Affect Detection**

Accepted as a poster presentation at **NeurIPS Workshop on Machine Learning for Mobile Health (ML4MH) 2020**

2. **Scalable Deep Learning for Stress and Affect Detection on Resource-Constrained Devices**  [Slides](#)  [Code](#)

18th IEEE International Conference on Machine Learning and Applications (ICMLA) 2019, Florida, USA

3. **A Two Stage Machine Learning Approach to Forecast the Lifetime of Movies in a Multiplex**  [Code](#)

Future of Information and Communication Conference (FICC) 2020, San Francisco, USA

4. **WaDeNet: Wavelet Decomposition based CNN for Speech Processing**

Under review at the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2021

SELECTED PROJECTS

Transfer Learning for International Crisis Response

 [Code](#) Jan 2020


→ Used RoBERTa to transfer knowledge across organizations to improve the classification effectiveness for organizations with smaller amount of available training data. Among top 5 submissions at the challenge held as part of AMLD 2020.

AppService for Building Depot

Jan 2020 - present

→ Built a managed AppService using Flask and Nginx for hosting IoT apps in discrete LXC containers. Created REST APIs for other systems to be able to interact with AppService and deploy third party apps.


Pollen Grain Classification

 [Code](#) May 2020 – Jun 2020

→ Implemented a two-stage segmentation - classification approach to classify pollen grain images.

★ To be presented at the ICPR 2020 Challenge Workshop.

TARS: Workplace Automation and Compute Server Management

 [Code](#) Dec 2019 – present

→ Added capability to TARS, a workplace automation bot for Solarillion Foundation's Slack workspace. Features include auto-verifying assignments, tracking student progress, providing updates on office hours and remote server access.

SKILLS

Programming Languages: Python, C, C++, SQL, Bash, Javascript, \LaTeX

Frameworks and Libraries: PyTorch, TensorFlow, Git, scikit-learn, Keras, Flask, REST APIs

Additional Skills: Server Administration

AWARDS & HONOURS

→ Only student from SRM selected for a research internship at CMU in the academic year 2019-20.

→ Submission ranked in top 3% in the Spotify Sequential Skip Prediction challenge conducted by Spotify and AICrowd.

→ Best project award at SRM ICIOT 2019.

VOLUNTEERING & RESPONSIBILITIES

→ Served as a reviewer for ICMLA 2020 Special Session on Deep Learning.