Abhijith Ragav

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Education

Georgia Institute of Technology *Aug 2021 – Dec 2022 (Expected)*
Master of Science in Computer Science

SRM Institute of Science and Technology *Jul 2016 – Jun 2020*
Bachelor of Technology in Information Technology *Grade: 88.9%*

Experience

Carnegie Mellon University *Pittsburgh, PA*
Research Intern (Synergy Labs) *Jan 2020 – Jun 2020*
→ Developed a scalable IoT system that interfaces with Mites to run IoT apps with a focus on Privacy and User Access Control.
Advisor: Dr. Yuvraj Agarwal

Solarillion Foundation *Chennai, India*
Undergraduate Research & Teaching Assistant, Server Administrator *April 2018 – May 2020*
→ 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 *Chennai, India*
Machine Learning Intern (RISE Lab) *May 2019 – Jul 2019*
→ 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***
   *Poster at **NeurIPS** Workshop on Machine Learning for Mobile Health (ML4MH) 2020*
2. ***Bayesian Active Learning for Wearable and Mobile Health***
   *Poster at **NeurIPS** Europe meetup on Bayesian Deep Learning 2020*
3. ***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
4. ***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

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 the 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.
★ 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, MongoDB, 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.