RISHI VARDHAN K

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EDUCATION

Sri Sivasubramaniya College Of Engineering *Chennai*
B.E. in Computer Science & Engineering; *August 2018 - May 2022*
CGPA: 8.83 (V semesters)

EXPERIENCE

Solarillion Foundation April 2020 - Present
Teaching Assistant and Server Administrator *Chennai, India*

- Currently working on automating the server applications by developing suitable bots for maintenance.
- Assisted new orientees on entry level python and machine learning assignments.

Solarillion Foundation September 2019 - Present
Research Assistant *Chennai, India*

- Involved as part of Machine Learning Research Group focusing on Computer Vision.
- Research on neural network's robustness to adversarial patch attacks.

TECHNICAL STRENGTHS

Computer Languages	Python, C, Java, Shell, C++, HTML, CSS, SQL
Machine Learning	scikit-learn, Keras, Tensorflow, PyTorch, Mindspore
Frameworks	Pandas, Numpy, Git, Adversarial-Robustness-Toolbox, OpenCV, Hugging-face

PUBLICATIONS

Defending Against Localized Adversarial Attacks on Edge-Deployed Depth Estimators
Standalone Research

- Research paper published at the **ICMLA'2020** conference.

Text Classification and Generation on Common Sense context using NLP Techniques*
SemEval Lab Workshop

- System description paper for SemEval 2020 Task 4 Common Sense Validation and Explanation published at the **COLING'2020** conference.

Tweet Check Worthiness Using Transformers, Convolutional Neural Networks and Support Vector Machines*
CheckThat Lab Workshop

- System description paper for CheckThat Lab challenge published at the **CLEF'2020 conference**.

Transformers in Semantic Indexing of Clinical Codes*
eHealth Lab Workshop

- System Description paper for eHealth challenge published at the **CLEF'2020** conference.

PROJECTS & RESEARCH

Blood Pressure Prediction Ongoing

· Working on developing a deep learning based blood pressure prediction system with plethysmograph signals

Cifar-10 Image Classification*
MLH Hack Cambridge 2021 ***Runner-up in Huawei AI Challenge***

· Developed a Quantized Resnet-18 model using Mindspore backend for porting to edge platforms.

Self harm Risk Prediction*
Natural Language Processing; Sentiment Analysis;

· Worked on developing a text classification model on Reddit users data under self harm context. Models worked on: **CNN, Gradient Boosting, Random Forest, SVM, Roberta**, etc.

Adversarial attack impact on different Resnet models*
Computer Vision; CIFAR-10; GTSRB;

· Experimented and analysed different **Resnet-18** models: **Quantized** and **Denoised Auto Encoder input** models on their adversarial robustness to Fast Gradient Sign method(**FGSM**) attack.

Water Anomaly Prediction*
Hybrid CNN-ELM; GECCO Dataset 2017

· Developed a Hybrid model of CNN and ELM to classify water sensor readings as anomaly or normal.

Flight Delay Prediction*
Classification and Regression Model

· Worked on developing a two stage machine learning model to predict whether a flight will be delayed or not and the amount of delay(if delayed) on consideration of historical flight performance and weather data.

Stack Overflow Assistant*
Conversational Telegram bot

· Developed a **Telegram bot** to answer programming-related questions and chit-chat and simulate dialogue on all non programming-related questions. The model was deployed on an **AWS instance**.

RELEVANT COURSES AND CERTIFICATION

Deep Learning Specialization* - Set of 5 Courses offered by DeepLearning.ai from Coursera

Natural Language Processing* - by National Research University Higher School of Economics on Coursera

Social Networks - NPTEL course offered by IIT Ropar

University Courses - C Programming, Discrete Mathematics, Design and Analysis of Algorithms, Data Structures, Database Management Systems, Unix and Shell Programming, Computer Organisation and Architecture

EXTRA CURRICULAR ACTIVITIES

IEEE • NSS • SSN Coding Community • SSN Developer Community

* Click to view source