Keerthan Bhat
Software Developer | Machine Learning Engineer

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EDUCATION

B.E. Computer Science & Engineering
R. V. College of Engineering
08/2016 - 08/2020   *CGPA - 8.97*

SKILLS

Python   Java   C/C++   TensorFlow/Keras

PyTorch   R/Matlab   AWS/Azure   Django

EXPERIENCE

Software Engineer
Samsung Research Institute, Bangalore
01/2021 - Present
Working in the Vision Research Group
- *Achievements/Tasks*
- Improved the compression efficiency of Versatile Video Codec (VVC) using Neural Network based filters.
- Conducted extensive experiments with architectures, loss functions, hyperparameters & training strategies.

Data Science Intern
Curl Analytics
07/2020 - 12/2020
Working in Document Analysis team
- *Achievements/Tasks*
- Worked on creating data preparation pipelines and deep learning models for Named Entity Recognition.
- Worked on various NLP tasks such as text classification, language inference and sequence labelling.

Research Intern (final-year thesis)
Samsung Research Institute, Bangalore
01/2020 - 06/2020
Worked in the Visual Intelligence R&D team
- *Achievements/Tasks*
- Built Deep Learning models for enhancement of Time-of-Flight (ToF) depth images using RGB modality.
- Performed literature studies, survey on ToF data generation tools & worked on synthetic data generation to tackle lack of accurate real ToF data.

Summer Intern
Samsung Research Institute, Bangalore
05/2019 - 07/2019
Worked in the Voice Intelligence R&D team
- *Achievements/Tasks*
- Built an end to end pipeline for Video Analysis tasks on a mobile device where a video captured on an Android app is sent frame-wise to a Flask server.
- Used Multi-modal Emotion Classifier as a use-case.

Software Engineering Intern
ZoomTail Technologies
05/2018 - 07/2018
E-Commerce start-up in fashion industry
- *Achievements/Tasks*
- As the first Engineer, built a Content Management System (CMS) for huge amounts of incoming images from apparel manufacturers.
- Handled full-stack development, testing & deployment.

SELECTED PROJECTS

Dynamic Pricing & Automated Billing for Retail
- Trained a model using LSTM and other NLP algorithms to dynamically predict prices of retail products.
- The prices were retrieved from AWS to an R-Pi based embedded system & customer buys the product using RFID tags.
- Django based website for the customers to login and pay their bill using a Payment Gateway or a Wallet.
- Paper on this project accepted in IEEE conference March 2019.

Monocular Depth Estimation using Single RGB Image
- Investigated the usage of U-Nets for Depth Estimation on KITTI & NYU Depth V2 datasets and achieved a high RMSE score of with fewer parameters than SOTA.
- Conducted extensive literature survey & gave a technical seminar on this topic on tradeoff b/w layers & parameters.

Landmark Recognition using CNNs
- Trained a VGG-16, ResNet & Xception network for the Google Landmark Recognition Challenge on Kaggle and achieved high accuracies for all the networks.
- Performed data preparation using bounding boxes for training.

Stock Prediction using Twitter Sentiment Analysis
- Predicted public sentiment about companies using tweets from last one year via a jointed CNN and RNN architecture.
- Using the predicted public mood and previous stock price data and predicted the future stock price using fully connected neural networks.

Flood Occurrence Forecast using Rainfall data
- Using Australian weather dataset and heat maps, trained a model using Recurrent Neural Network, Random Forest and Support Vector Machine algorithms to forecast floods.
- This project reached finals of Microsoft Code.Fun.Do++ 2018.

AWARDS & RESPONSIBILITIES

-> Toastmasters Club President (2021)

-> Toastmasters Club VP-Education (2020)

-> Selected for JP Morgan's Code for Good (2019)

-> PESIT Ingenius Hackathon 3rd place (11/2019)

-> Microsoft Code.Fun.Do++ finalists(2018 & 2019)

-> RVCE Business Marathon finalists (02/2019)

-> IBM IOT Hackathon finalists (03/2018)

-> PESIT Ingenius Hackathon finalists (09/2017)

-> TEDx RVCE Speaker Curator (2017)

INTERESTS

Writing   Reading   Public Speaking