Sumukh S

Last Updated on 17th October 2019

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EDUCATION

IIIT, HYDERABAD
B.Tech + MS (research) in Computer Science, NLP
Advisor: Dr Manish Shrivastava
Expected June 2021 | Hyderabad, India

VVS SARDAR PATEL
High School
Science and Electronics
Bangalore, India

CONTACT

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COURSEWORK

Natural Language Processing (1 & 2)
Information Retreival and Extraction*
Opimization Methods
Statistical Methods in AI (Intro to ML)
Database Systems
Distributed Systems*
Compilers*
Speech Technology
Artificial Intelligence
Computer Graphics
Computer Networks
Operating Systems
Data Structures and Algorithms

TECHNICAL SKILLS

Programming languages:
Python • C • C++ • Bash
ML/DL/NLP:
PyTorch, NLTK, scikit-learn
Others:
Git • LaTex • OpenGL • MySQL • Matlab • Flask • JS • HTML • CSS

AWARDS

Best review paper, Algorithm course, 2017
Indian National Mathematics Olympiad(INMO) Finalist, 2011

EXPERIENCE

DATA SCIENCE INTERN | Indian School of Business (ISB)
August 2019 – Present | Hyderabad, India
- Working with Center for Analytical Finance (CAF) to automate the process of loan approval using statistical machine learning algorithms.

DATA SCIENCE INTERN | Onward Health
May 2019 – June 2019 | Hyderabad, India
- Built models for identification of cancer in liver tissue WSIs & segmentation of affected areas using deep learning algorithms for computer vision.

RESEARCH ASSISTANT | NLP lab, KCIS, IIIT-H
Apr 2018 – present | Hyderabad, India
- Advisor: Dr Manish Shrivastava. Currently working on extraction of key elements from unstructured legal documents. Previously worked on multimodal representation for Visual Question Answering [VQA].

SWE INTERN | MarketFront Software Solutions
Aug 2017 – November 2017 | Hyderabad, India
- Led a team of 3 and built an android application, a webapp and a RESTful API for the clients to fetch and update details of the products in their inventory.

PROJECTS

CROWD FLOW PREDICTION AND CLIENT DISCOVERY USING WIRELESS NETWORKS | Python, C, Raspberry Pis
Big Data and Policing | Spring 2019
This was a project on identifying crowd patterns by WiFi requests sent by mobile devices. The client locations can be triangulated. This data was also used to create heat-maps and perform time series analysis using ARIMA and Prophet.

WORD PROBLEM SOLVER | Python, PyTorch
Natural Language Processing | Monsoon 2018
Given an arithmetic word problem, it extracts the relevant quantities, and creates the **expression tree** by predicting the operators, using **Deep Reinforcement learning [DQN]**. Built using PyTorch.

VISUAL QUESTION ANSWERING MODEL | Python, PyTorch
Natural Language Processing | Monsoon 2018
Takes an image and a question about the image as the input, and predicts the answer to the question. Used **Bilinear Attention Networks [BAN]** in the model.

MINI-DROPBOX: P2P FILE SYNC | C++
Computer Networks | Spring 2018
Implemented an Application Level program for a P2P-network to keep two separate directories synced, similar to Dropbox. Used sockets to communicate; maintained file-indices, and MD5 hashes on all peers.

LINUX SHELL | C
Operating System | Monsoon 2017
Command line interpreter which supports background jobs, environment variables, signal catching, piping and redirection with extensive error-handling.

OTHER PROJECTS
Legend of Zelda (3D) like game (C++, OpenGL), HTTP proxy server with cache (Python), Quiz webapp (Ruby on Rails), SQL Engine (Python).