M SNishanth

Contact

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Languages

Tamil, English,
Hindi, Malayalam

Programming Languages

♥ C, C++, Python
PHP, Rust,
Ansible, JSP, Latex
LaTeX

Education

2020– .	**Software Engineer** at F5	Hyderabad, India
2018–2020	**Master's** in Computer-Science & Engineering	IIT Hyderabad
2013–2017	**Bachelor's** in Computer-Science & Engineering	UCET, Tindivanam

Interests

DNS

Machine Learning

Security

Skills

PROGRAMMING
Skilled in C, C++ and able to adapt quickly to new languages. Languages I have used over the years include Rust, Python, JS, Ansible.

FRAMEWORK
DNS, TCP/IP, Pytorch, Perforce, Git*, Mlflow*

TOOLS
Wireshark, Vim, GDB, VSCode, Jira, Postman, Numpy, SciKit, Pandas, Matplotlib, Latex.

Projects

Jun - Aug '19 **Structured Optimal Transport [OT]**
A method to include structural information in OT. Applying this for Colour Transfer problem which is quite similar to Style Transfer problem. We achieve this by using a sub-modular function on the combined structural information from segmentation on images and the distribution of colours in images. This can be further extended to language modelling or the OT itself could be used as a cost metric in different scenarios. Ex- French to English translation without knowing the word-meaning.

Jan - Apr '19 **Super SloMo: High Quality Estimation of Multiple Intermediate Frames for Video Interpolation.**
Intermediate frames are generated for each pair of frames in the original video hence producing good slow motion video experience while preserving the original information of objects in the video without pixelating. For this optical flow information is determined using a U-Net architecture. This information is passed to a CNN which uses a backward warping bi-linear function, time-flow interpolation and masking this with the visibility maps of the pair of source frames intermediate frames are generated.

Jan -Apr '19 **Functional Matrix Factorization for cold start Recommendation.**
We use Matrix factorization for Collaborative Filtering Decision Tree based interview model. A function of user's answers to the interview question is used to generate the user profile. The opinion of users is recorded by basic questions. Based on the responses to the questions, the characterisation of the user is gradually refined. Both user and item profiles are to be learnt using Iterative Optimization which alternates between the decision tree construction user profile and latent profile extraction.

Aug - Nov '18 **Link prediction in Bipartite Graphs.**
For any graph or community that can be represented by a graph, If it can be converted to a Bipartite graph the link prediction can be done more effectively. For these features of the graph is identified and is converted to a Bipartite graph then, a unipartite projection of the graph is made. Using this candidate node pair (CNP) and patterns is defined on the projected graph. The connectivity of the CNP is calculated based on the weight of the patterns it covers. Such connectivity of the CNP is used as the final score of link prediction.

Nov. - 2018 **Hierarchical approach to mutual exclusion in Distributed Computing**
An efficient implementation of a hybrid mutual exclusion algorithm for distributed systems by combining Raymond's and Maekawa's algorithms by multiplexing between them when communicating within clusters and across clusters, based on load, latency and throughput. As part of the course project for Distributed Computing- CS5320.

Aug - Nov '18 **Irony detection in English tweets**
Identification of Lexical features [characteristic of the tweet], Syntactic features [entity relationship], Sentiment features [lexicon and polarity by existing dictionary], Semantic features [word embedding] was used to understand the characteristics of tweet. Using these features an SVM based classifier was used to detect Irony.

Aug - Nov '18 **Recommendation System**
Using Latent Dirichlet allocation, latent profile for each user and latent profile for movie-genre is generated. Using this the affinity of a user towards the set of genres of movies and each movie is calculated.

Co-Curricular

Feb 2021 **Be F5 Day video**
Responsible for consolidating the be F5 day 2022 and constructing a video.

2018–2020 **Teaching Assistant**
Responsible for grading and evaluating assignments for various course work at IIT Hyd.

CALDAM'19 **Organizer**
Organizing Committee of the Conference.

2015–16 **Programming Ability**
Treasurer of CETA Club UCET

2015–17 **Quick Learning Capability**
Graphic Designer @CETA Club and for Dept. of CSE Symposium

2015–17 **Good in Communication**
Web Design Head @CETA Club UCET

Hobbies

Gaming
Competitively play MMORPG games, and also design games.

Photography
Nature photography.

Aquascaping
Enjoy creating and maintaining nature Aquascapes

Read Manga
Shonen prints