SANKET HOSALLI

Programming Enthusiast

- C.S.E **B.Tech**, IIT Dharwad

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Relevant Courses

- IIT Dharwad

- Software Engineering
- Automata Theory
- Data Analysis
- Data Structures and Algorithm
- Parameterized Algorithms
- Probability and Random Process
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Computer Networks
- Computer Architecture
- Operating Systems
- DataBases and InfoSys[3]
- Compiler Design
- Distributed Systems
- Philosophy

Biography

I am a senior year undergrad at IIT Dharwad, well versed in utilizing the best tools and techniques to produce analytical(or technical) solutions addressing real-world problems predominantly centering around structuring Data to ease out IT Operations.

Education

IIT Dharwad — 08/2017 - 04/2021
B.Tech in C.S.E

Vijaya Ratna Junior College — 04/2015 - 04/2017
Intermediate College, Cumulative Score: 88%

Kendriya Vidyalaya Sanghathan — 05/2005 - 05/2015
CBSE School, CGPA: 9.6

College Projects

1) Face Recognition Project — 01/2021 - Present
Skills Used | TensorFlow, Pandas, MatPlotLib, etc.

Multiple faces are classified on the basis of probabilistic density comparison of different faces. Deep Learning Techniques, such as Deep Convolution Networks and Matrix Augmentation are used.

2) Simple SBI — 09/2020 - 11/2020
Skills Used | Django, HTML, CSS, JavaScript, jQuery, BootStrap4, Sqlite3, etc.

A website depicting a real-life scenario of SBI(Bank in India) while distributing the computing power to multiple nodes in the environment. Motivation behind this project was to create multi-noded system(Distributed Environment).

3) Operating Systems | Minix Modification — 01/2020 - 05/2020
Skills Used | C, Git, Java, Shell, Virtual Machine, etc.

Various components of the operating systems were modified according to college course requirements.

4) Galaxy Classification | Machine Learning — 08/2019 - 11/2019
Skills Used | Python, NumPy, Pandas, MatPlotlib, TensorFlow, Shell, Excel, etc.

A basic course project where the several galaxies were classified into spiral or normal based on their radius and emission spectrum. K-Means Clustering was the base algorithm for clustering the galaxies into different types.

5) Phone Directory — 08/2018 - 10/2018
Skills Used | HTML, CSS, JavaScript, PHP, MySQL, Shell, etc.

This was a phone number and information storage with retrieval project. All basic and complex actions, such as input, delete, modify were implemented. Also levels of leverages were defined, they were User-Level and Admin-Level.

Language

- English
- Hindi
- Kannada
- Telugu

Skills

- Unix, Bash, Shell
- C, C++, Java, Python
- Perl, Ruby, R
- Xml, Sqlite3, Redis, Mysql
- Git, Github, BitBucket
- Awk, Sed, Latex
- HTML, CSS, JavaScript
- jQuery, BootStrap4
- AngularJS, NodeJS
- PHP, SQL, Django, JSP
- Docker, Kubernetes
- Spark, Hadoop
- Dart, Kotlin, Flutter
- TypeScript, Go, Swift
- Nginx, Apache, OpenVPN

Audited Courses

- udacity.com

- Android APP Development
- Version Control with Git
- Computer Networking
- Data Analysis
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Deep Reinforcement Learning
- Natural Language Processing
- Self Driving Car (SW[1])
- Robotics Software Engineer (SW)

Personal Projects

1) Authentication Core — **Vorhanden[2]**
Skills Used | Python, Sqlite3, C, Web-Languages, etc.

A customizable authentication middleware for user data security. Email based authentication method are predefined.

2) Scalable Search Engine — **Vorhanden**
Skills Used | Python, Shell, C, Sqlite3, etc.

A multi nod-ed environment with distributed computing operations. Distributed crawler with politeness feature for fetching documents from web. Efficient word indexing for user-query processing with recent search caching. This search engine also has many api based calls for section discretization.

3) User Comment(s) handling Core — **Vorhanden**
Skills Used | Python, Sqlite3, Web-Languages, etc.

People Interaction through multi-level commenting engine. Deep comments are processed with custom foreign key written in Python and Stored in Sqlite3. Depth of Comment can be changed with slight modification in source code for custom choices.

4) Portal Management Core — **Vorhanden**
Skills Used | Django, Sqlite3, Web-Languages, etc

A general portal where questions(queries) can posted, with a stable answering environment. The above **(1)** and **(3)** are(can) be embedded in this environment.

5) Backend Monitoring Core — **Vorhanden**
Skills Used | Python, Tensorflow, Pandas, Sqlite3, etc.

Machine learning based back-end potential theft monitoring core. Main algorithms used here is Naive based classification method to detect anomaly based on feature value irregularity. A clear theft is clearly detected in scenarios of high traffic or some bot based attack.

6) Customizable Local Reverse Proxy — **Vorhanden**
Skills Used | Nginx, Apache, Python, Shell, etc.

Reverse proxy built on Nginx, Apache. Shell used for request logging. Python is used for detecting anomaly using Machine Learning algorithms on the basis of features such as IP address.

7) Load Balancer (Local+Global) — **Vorhanden**
Skills Used | Nginx, Apache, Shell, Python, etc.

Inherited from above **(6)** with some additional utilities. This Load-Balancer has option for normal request routing and persistence(mainly for data processing requests) request routing. Various load balancing paradigms such as round robin, cpu power, admin choice, random, etc are possible. 429(Request Overloading) Error can also be handled by temporary(or permanent, based on overloading factor) blocking the user access.

8) Vps Based VPN — **Vorhanden**
Skills Used | OpenVPN, Nginx, Python, Shell etc.

An VPN for request hopping to provide user privacy. Shell used for logging user Client Requests. Machine Learning algorithms used for detecting anomalies in client fetch event.

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SANKET S HOSALLI