GAUTHAM SREERAM DASU

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ACADEMIC DETAILS

Master of Technology in Computer Science
June 2018 – April 2020 — GPA: 8.4*/10
Sri Sathya Sai Institute of Higher Learning — Prasanthi Nilayam, India

* – 3 Semesters GPA.

Master of Science in Mathematics with Specialization in Computer Science
June 2016 – April 2018 — GPA: 7.8/10
Sri Sathya Sai Institute of Higher Learning — Prasanthi Nilayam, India

Bachelor of Science (Hons.) in Mathematics
June 2013 – April 2016 — GPA: 7.1/10
Sri Sathya Sai Institute of Higher Learning — Bengaluru, India

GRADUATE PROJECTS

Automatic Detection and Extraction of Information from Scanned Documents.

June 2019 – March 2020

- Built an end-to-end pipeline for relevant information detection, extraction and updation to a database from scanned identity documents using YOLO object detector.
- Improved the overall accuracy of the model from 72% to 94% by localization of the card in the input using image processing and heat map based methods and also achieved a Mean Average Precision of 0.78.
- Ported the trained model to Android device for relevant field detection in near real time and provided a web interface for the same using python-flask.
- Implemented and modified techniques for automatic detection of tables for detecting rows and columns in a table.

A Comparative Study of Watermarking Techniques for Medical Images .

June 2017 – March 2018

- Implemented reversible watermarking techniques for medical images using Difference Expansion and Bit Substitution methods. Generated a feature vector from the image and used it as a watermark for finer tamper detections in the image.
- A comparative study of frequency domain based techniques and reversible techniques was also performed. We concluded that frequency domain based techniques performed better than reversible techniques for different types of noises but lacked finer tamper detection abilities.

Text editor in C.

November 2015 – March 2016

- Implemented text editor with features of password protected user interface and tab key press word suggestion.
- Functionalities like searching, insertion, deletion of words in the editors dictionary were also implemented.

AREAS OF INTEREST

Software Engineering, Digital Image Processing, Cloud Computing, Scalable System Design and Distributed Systems .

ACHIEVEMENTS

- Presented a poster titled **"A Novel Real-time Scalable Recommender System using Collaborative Filtering and NLP Techniques"** at Student Research Symposium, IEEE International Conference on High Performance Computing (HIPC - 2019), Hyderabad, India
- AWS **Certified Cloud Practitioner**
  Dec 2019 - Dec 2022

SKILLS

Programming Languages:
C, C++, Python, Matlab and working knowledge of JAVA.

Tools and Technologies:
Jupyter Notebook, AWS, Kafka, OpenCV, Flask.

OTHER PROJECTS

Financial Fraud Detection System:

- Simulated financial transaction streams and flagged fraudulent transactions using KSQL and Kafka.

SSSIHMS - AVAS:

- Developed and deployed a voice announcement system for automatic announcements of blood requests from a locally hosted server through mobile and web interfaces in a hospital environment.
- Handled a special case of live streaming of devotional songs and pausing during the announcement and play back after announcement is done.

Voice controlled home devices:

- Created and demonstrated a voice based home devices control using Google speech to text module and Raspberry Pi GPIO programming in Python.

EXTRA CURRICULAR

- Section leader of a traditional band in the university.
- Vice-Captain for the winning Orchestra team in the year 2019.

OTHER INTERESTS

Blogs, Music, Dramatics, Basketball, Photography and Multimedia Editing .