Aravindh Sharma

A protean, self-driven and passionate individual equipped with strong algorithmic thinking, independent research ability, and technical skills on Image processing, big data, machine learning, web development looking to apply learned knowledge and skills to real-world situations in a demanding environment.

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WORK EXPERIENCE

Software Developer Intern
TCS ION

05/2017 *Chennai, India*

Achievements/Tasks

- Worked on Online Bank Management System project developed in java/jsp using jdbc. Used Microsoft access as a database to store all the details of customer account in a table.
- Implemented most of the feature of online bank. User can login, request a deposit amount, do withdrawal, check his/her current balance, transfer amount from one account to another account, and view reports of all the transaction.
- Deployed website to heroku. Heroku hosts apps on the internet, not static websites. To get it to run static portfolio, personal blog made heroku to recognise the website as php app.

Professional Freelancing
Upwork Global Inc

05/2018 – Present

Achievements/Tasks

- Developed a python code to recognize and read documents/image to convert to a scanned copy using thresholding techniques in image processing.
- Created an Android mobile application with database connectivity feature by using Eclipse IDE with Android SDK. Installed WAMP Server, classified mobile - client side and database - server side tasks and implemented it.
- Used OpenCV for image and video analysis by capturing the video camera, detected objects with specific color and preformed morphological operations to remove noise and impurities present in the video in real time.
- Designed UI for hotel management system using Tkinter.

EDUCATION

B.Tech. Information Technology
Sastra University
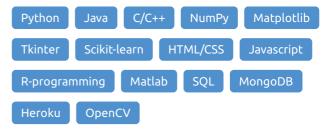
07/2015 – Present *Thanjavur*

12th
Sree Venkateswara Vidyalaya

06/2014 – 03/2015 *Trichy*

10th
Sri Akilandeswari Vidyalaya

05/2012 – 03/2013 *Trichy*

SKILLS

Python   Java   C/C++   NumPy   Matplotlib

Tkinter   Scikit-learn   HTML/CSS   Javascript

R-programming   Matlab   SQL   MongoDB

Heroku   OpenCV

PERSONAL PROJECTS

Retinal vessel segmentation system using image processing techniques (06/2018)

- Retinal vessel segmentation is performed on DRIVE and STARE datasets.
- Aside from accuracy, robustness and processing speed are also considered and it is achieved by using processes such as multiple independent procedures in parallel, thus having an execution time of 1.4s per image on CPU platform.
- The proposed system has achieved a high accuracy with a short execution time. During the process, the system has utilized top- hat transform for greyscale redistribution and global thresholding for dichotomizing vessel and non-vessel elements in the venules extraction phase.
- The proposed method has achieved an average accuracy of 95% with the help of confusion matrix, the system is designed to minimize the computing complexity.

News recommendation system (09/2018)

- A news recommendation system involving collaborative filtering, content-based recommendation and breaking news recommendation.
- Can be adapted easily to be put into use in other circumstances.

PAPER AND PUBLICATIONS

"A Review on Blood vessel segmentation algorithms" (under review)

The aim of this paper is to review, analyse and categorize the retinal vessel extraction algorithms, techniques and methodologies, giving a brief description. Intend to give the readers a structure for the existing methods to introduce the range of retinal vessel segmentation algorithms to discuss the current trends and future directions and summarize the open problems.

LANGUAGES

English   ● ● ● ● ○

Tamil   ● ● ● ● ●

Hindi   ● ● ● ○ ○

INTERESTS

MEAN Stack   LAMP Stack   Web development

AngularJS   ReactJS   NodeJS   SQL