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Skills

Programming languages

Python, MATLAB, C, C++, JavaScript, Verilog, L^AT_EX

Deep learning

PyTorch, torchvision, torchtext, scikit-learn

Image processing

scikit-image, OpenCV, PIL

Data mining

Google BigQuery, SQL

Applications

Xilinx Vivado, Microsoft Azure, Keil μ Vision

Hardware

Raspberry Pi, Arduino, Xilinx Nexys-4

Web/app development

Django, React, React Native, JavaScript

Projects

Deep learning for colon cancer detection

Nov 2019 - Present

Design and development of an automated colon cancer detection system from H&E stained histopathology images.

Emotion recognition using physiological signals

Aug 2019 - Nov 2019

Designing an embedded system to recognize emotions using ECG, GSR and SKT signals with deep learning.

Deep learning for kidney cancer detection

May 2019 - Sep 2019

Segmentation of nuclei in histopathology images of kidney tissues to improve the automated diagnosis of cancer using deep convolutional neural networks.

Detecting Ponzi schemes in Ethereum smart-contracts

Aug 2019 - Sep 2019

Using semi-supervised learning on raw bytecode of smart contracts deployed on the Ethereum blockchain mined using Google BigQuery.

Fake news detector

Jul 2019 - Aug 2019

Classifying news articles on a scale from true to fake to help prevent the spread of fake news using natural language processing.

Space-Time Adaptive Processing in radars

Apr 2019 - May 2019

Studying Radar Signal Processing and implementing Space-time Adaptive Processing(STAP) in a radar in MATLAB.

Spell checker

Oct 2018 - Nov 2018

A command line based spell checker written in C.

Real-time face detection and recognition

May 2018 - Jul 2018

Building a real time face detection and recognition system using OpenCV, scikit-learn and dlib on a Raspberry Pi.

Education

National Institute of Technology Karnataka, India <i>B.Tech in Electronics and Communications Engineering</i>	2017-2021(expected)
Little Rock Indian School, Karnataka, India <i>K-12</i>	2004-2017

Course Work

Digital signal processing in Python, Digital system design in Verilog, Embedded system design, Microprocessors, Control Systems, Numerical Analysis, Data structures and algorithms, Digital & Analog electronics, Digital & Analog communication

Awards and Honors

School topper in Math(99/100) and English(98/100) in Grade 12
Top 1%(CGPA 10.0) in India in Grade 10

Experience

Research Assistant <i>Under Dr. Shyam Lal - NITK, India</i> Design and development of automated colon cancer detection system from H&E stained histopathological images.	Oct 2019 - Present
Research Intern <i>Under Dr. Shyam Lal - NITK, India</i> Worked on building deep learning models for the segmentation of H&E stained histopathology images of kidney tissues to improve the automated diagnosis of kidney cancer.	May 2019 - Jul 2019
Frontend Engineer <i>IRIS-NITK, India</i> Worked on building the frontend for the official student management portal 'IRIS' with more than five thousand daily active users including students, faculty, administrators and alumni. Mentored a freshman intern on frontend testing using JavaScript - Winter 2018.	Aug 2018 - Apr 2019
Python Developer <i>Pinnacle Media, Manipal, India</i> Worked on implementing real time face detection and recognition using OpenCV, dlib and scikit-learn on a Raspberry Pi.	May 2018 - Jul 2018

Interests

Medical imaging, biomedical signal processing, computer vision, cybernetics, augmented reality

Last updated: November 3, 2019

<https://github.com/rshwndsz/resume/blob/master/CV.pdf>