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Skills

Programming languages
Python, MATLAB, C, C++, JavaScript, Verilog, LaTeX

Deep learning
PyTorch, torchvision, torchtext, scikit-learn

Image processing
scikit-image, OpenCV, PIL

Data mining
Google BigQuery, SQL, requests, BeautifulSoup, selenium, scrapy

Applications
Xilinx Vivado, Microsoft Azure, Keil µVision

Hardware
Raspberry Pi, Arduino, Xilinx FPGA

Web/App development
Django, React, React Native for iOS and Android, JavaScript, HTML, SCSS

Projects

Emotion recognition
Designing an embedded system to use ECG, GSR and SKT signals to recognize emotions.

Deep learning for colon cancer detection
Design and development of automated colon cancer detection system from H&E stained histopathological images.

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

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

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

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

Spell checker
A command line based spell checker written in C.

Education

National Institute of Technology, Karnataka, India 2017-2021(expected)
B.Tech in Electronics and Communications Engineering

Little Rock Indian School, Karnataka, India 2004-2017
K-12

Course Work

Digital signal processing in Python, Digital system design in Verilog, Embedded system design, Microprocessors, Control Sytems, 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 October 2019 - Present
Under Dr. Shyam Lal - NITK, India
Design and development of automated colon cancer detection system from H&E stained histopathological images.

Research Intern May 2019 - July 2019
Under Dr. Shyam Lal - NITK, India
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.

Frontend Engineer August 2018 - April 2019
IRIS, NITK
Worked on building the frontend for the official student management portal with more than five thousand active daily users including students, faculty, administrators and alumni.
Mentored a freshman intern on frontend testing using JavaScript - Winter 2018.

Python Developer May 2018 - July 2018
Pinnacle Media, Manipal, India
Worked on implementing real time face detection and recognition using OpenCV, dlib and scikit-learn on a Raspberry Pi.

Interests

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