

EDUCATION

- **National Institute of Technology Karnataka (NITK)** Surathkal, India
Bachelor of Engineering in Electrical and Electronics; GPA: 8.28/10.0 *July. 2011 – May. 2015*

PUBLICATIONS

- **An LSTM-Dense Merged Hybrid Network for ICD-10 Coding of Clinical Free Text**
Accepted, ICSWNL-2018 (Conference Code: 18FR03ICSWNL; Paper Code: 18FR030269)
 - **Abstract:** A hybrid neural network, using wide architecture of Dense and LSTM layers for accurate classification of diagnosis text among massively categorical ICD-10 codes (approx. 93k classes) using Word2Vec.
- **Q-Map: Clinical Concept Mining With Phrase Sense Disambiguation**
Under Conference Proceedings, IEEE-BHI-2018; Accepted, BAICONF-IIMB-2018
 - **Abstract:** A medical concept mining system that runs UMLS Metathesaurus concept search on clinical free text inputs using Aho-Corasick finite state machine and context based negation detection using language models.

RESEARCH EXPERIENCE

- **Practo** Bangalore, India
Data Scientist *June 2015 - Present*
 - **Q-Map (Querent Map), An Intelligent Clinical Concept Mining System:** Refer publications section.
 - **An LSTM based system for ICD-10 Coding of Clinical Free Text:** Refer publications section.
 - **Practo Search:** Scalable system for faster search and intelligent suggestions using data driven adaptive ranking algorithm for personalized search results. Extending system support to allow multi-language and accent-agnostic search using language modelling and knowledge source graphs.
 - **Text Preprocessing and Adaptive Stopwords Filtering:** NLP based text preprocessing for noisy channels like HTML, RTF etc. and stopwords removal using Kullback Leibler Divergence and Inverse Document Frequency.
 - **Practo Discovery:** Web server level Url Discovery and Redirection System for preventing web traffic overload on Application Servers and protection against DDoS attacks.
- **Money Smart** Bangalore, India
Machine Learning Intern *December 2015*
 - **Smart Offers Recommendation:** Fetching media, by implementing scraping tools for websites and their classification for personalized offer recommendations based on popularity, user interests and geolocation by leveraging the concepts of logistic regression, support vector machines and decision trees.
- **DRDO** Bangalore, India
Intern *May 2013 - June 2013*
 - **Portable Terrestrial RADAR:** Implementation of a through-the-barrier imaging RADAR on FPGA, conceptually based on micro-doppler effect of human heartbeats.

UNDERGRADUATE PROJECTS

- **Application of Machine Learning in Image Segmentation** Advisor: Dr. Ashvini Chaturvedi
Major Project *July 2014 - May 2015*
 - **Abstract:** Implementing algorithms such as k-mean clustering and morphological edge detection for isolation of object boundaries images and enhancing the techniques to perform better on noisy images by employing classical image processing techniques supported by statistical estimations.
- **Touch Screen Remote Control for Motor Speed Control** Advisor: Dr. K Manjunatha Sharma
Mini Project *January 2014 - May 2014*
 - **Abstract:** Implementation of Touchscreen remote control using radio frequency communication for developing multi-level speed controller of AC motor and comparison with traditional infrared frequency based remote controls which has only line-of-sight operating capabilities.

- **Node Deployment Techniques for Object Tracking** Advisor: Dr. Ashvini Chaturvedi
Mini Project *January 2014 - May 2014*
 - **Abstract:** Comparison of effectiveness of random node deployment techniques based on Poisson and Normal Distribution for detecting intrusion in a restricted area.
- **Application of Object Tracking Algorithm in a Video** Advisor: Dr. Ashvini Chaturvedi
Mini Project *July 2013 - December 2013*
 - **Abstract:** Tracking trajectory of an object in a video using image processing techniques such as frequency domain analysis and 2D-DFT.
- **Speech Recognition System** Advisor: Dr. K Manjunatha Sharma
Mini Project *July 2013 - December 2013*
 - **Abstract:** Basic speech recognition system using total energy algorithm and zero-crossing algorithm to control speed operation of AC motor.

COMPETITIONS AND PROJECTS

- **Machine Learning Medium:** Author of the Machine Learning Medium (<https://machinelearningmedium.com>), a website for explaining academic papers, and the basics of mathematics and machine learning, built and maintained on github pages using Jekyll and hosted on CloudFlare.
- **Kaggle: Data Science Bowl 2017:** Among top 13% in Kaggle Data Science Bowl, 2017. Developed a machine learning classifier based on ResNet using 3D convolution for classification of malignancy of lung nodules from 3D CT Scans
- **Kaggle: Quora Questions Pairs:** Among top 16% in Kaggle Quora Question Pairs Challenge. Developed a LSTM, XGBoost transfer learning model for pairing of similar questions on Quora, a QnA website.
- **HackerEarth, IndiaHacks 2017:** Ranked 18 among several thousand participants at the IndiaHacks Challenge, 2017 organized by HackerEarth for solving real world classification problems of HERE maps and Hotstar.

EXTRA-CURRICULAR

- **Basketball Player:** Former Member of University Men's Basketball Team and MVP at various Tournaments. Currently, member of NGV A-Division Sports Club at Bangalore. Active follower of NBA.
- **Student Coach, University Women's Basketball Team:** Coached the Women's Basketball Team in the senior year, helping them with several podium finishes.
- **Member, Dance Drama and Fashion Club:** Former member of Dance, Drama and Fashion Club
- **Organising Committee Member, Incident, 2015:** Organizing committee member of Incident, 2015, one of biggest college cultural fests in India.

*References available on request.