AITHU SNEHITH

B.Tech undergraduate
Electrical Engineering
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EDUCATION

Year	Degree/Certificate	Institute/Board	CGPA/Percentage
2016 - Present	B.Tech	Indian Institute of Technology, Hyderabad	9.13 (Current)
2016	Senior secondary	Board of Intermediate Education, AP	98.3%
2014	Secondary	CBSE board	9.8

PUBLICATIONS

- **Artificial intelligence based detection of infectious keratitis using slit-lamp images**
  Kiran K. Vupparaboina, S. Vedula, ***Snehith Aithu****, S. Bin Bashar, K. Challa, A. Loomba, ARVO 2019*
  M. Taneja, S. Channapayya, A. Richhariya

- **Lung-Originated Tumor Segmentation from Computed Tomography Scan (LOTUS) Benchmark**
  Draft submitted to IEEE Transactions of Medical Imaging (TMI) 2019
  Secured 6th position world wide for Lung-Tumor detection in IEEE VIP up 2018. Competition manuscript with all the winner's implementation details has been submitted.

EXPERIENCE

- **KPIT Technologies Limited, Pune** - *Summer Intern* *July 2019*
  Worked on pruning and quantising neural networks, Image-to-image translation using VAE coupled GANs and tensorflow object detection API on traffic videos.
- **Hokkaido University, Japan** - *Research Intern* *may 2019 - June 2019*
  Done research on fish species detection using sonar images using deep learning techniques as a aprt of STSI program.
- **Hexagon Capability Center, Hyderabad** -*Winter Intern* *December 2018*
  Developed a Transfer learning model on Pointnet to segment 3D point clouds on custom Datasets in Tensorflow, Python.
- **LV Prasad Eye Institute, Hyderabad** - *Summer Intern* *May 2018 - July 2018*
  Developed a classifier using deep learning to detect and classify ocular surface Images.

TECHNICAL SKILLS

- **Programming languages:** Python, C++, C, Matlab, Verilog *
- **Python Packages Known:** NumPy, Tensorflow, SciKit-Learn, Keras, Matplotlib, OpenCV.
- **Tools & Software:** Arduino, Raspberry Pi, FPGA *

  ** Elementary proficiency*

PROJECTS

- **Domain Adaptation Using Reinforcement learning** *Ongoing*
  Dr. Sumohana S. Channappayya, Associate Professor, Dept. of EE, IIT Hyderabad
  Research on applying deep-reinforcement learning on Domain adaptation for image and video classification.
- **Fine-grain Dense Video Captioning** *Ongoing*
  Dr. C Krishna Mohan, Professor, Dept. of CSE, IIT Hyderabad.
  Working on detecting very fine-grained activities from videos and generating detailed captions describing the videos. We are currently working solving the above problem on MPII cooking Dataset.

- **End-to-End Learning of Communications Systems Without a Channel Model** *April 2019*
  Dr. Sai Dhiraj Amuru, Adjunct Assistant Professor, Dept. of EE, IIT Hyderabad.
  Implementation of paper on End-to-End Learning of Communications Systems Without a Channel Model using neural networks and reinforcement learning. The algorithm iterates between supervised training of the receiver and reinforcement learning (RL)-based training of the transmitter.
- **Machine learning Algorithms including CNN from Scratch**
  github.com/Aithu-Snehith/machine-learning-algorithms-scratch
  Implemented Convolutional Neural networks and many classical ML algorithms like Linear regression, MLE, Naive Bayes, SVM, KNN, PCA, K-Means clustering, GMM, HMM, ANNs, Variational and Sparse Auto-encoders from scratch in python only using numpy.
- **Lung Cancer Radiomics-Tumor Region Segmentation (IEEE VIP CUP)** *August 2018*
  Dr. Sumohana S. Channappayya, Associate Professor, Dept. of EE, IIT Hyderabad
  We have segmented and classified the tumor region of the lung slices (dicom files) using various classical and deep machine learning algorithms.

POSITIONS OF RESPONSIBILITY

- Science and Technology Secretary, Student Gymkhana - 2018 - 2019
- Core Member of Elektronica, Robotics and Kludge - 2017 - 2018
- Teaching Assistant for Representation Learning, Internet of Things and Vector calculus

ACHIEVEMENTS

- **IEEE VIP CUP 2018:** Secured 6th position world wide for Lung-Tumor detection.
- **Inter IIT Tech Meet 2018:** Secured 7th position among all IITs in Exoplanet Detection.
- **Inter IIT Tech Sports 2017:** Represented IIT Hyderabad as a team in Football.
- Achieved Microsoft Azure Award in Engineering the Eye hackathon, LVPEI
- Runner up in Megathon 2017 held at IIIT Hyderabad.
- **IIT Joint Entrance Examination 2016:** Secured All India rank 4315 among 1.5 million test takers.

KEY COURSES TAKEN

- Machine Learning and Deep learning
- Video Content Analysis
- Advanced Digital Signal Processing
- Data Structures and Algorithms
- Convex Optimisation
- Linear Algebra

** To be completed in Nov 2019*

FIELDS OF INTEREST

- Artificial Intelligence
- Internet Of Things
- Signal Processing
- Quantum Machine Learning

(References available on request)