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** *ARVO 2019*
  *Kiran K. Vupparaboina, S. Vedula, **Snehith Aithu**, S. Bin Bashar, K. Challa, A. Loomba, 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, Pytorch, 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.
- **Advertisement videos Understanding and Recommendations**
  Dr. C Krishna Mohan, Professor, Dept. of CSE, IIT Hyderabad. *Ongoing*
  Working on understanding advertisement videos by analysing the actions and emotions in a video using deep learning to recommend the persons the best suitable ad based on the genre, emotions and context of the videos watching.

- **Fine-grain Dense Video Captioning** *Jan 2019 - April 2019*
  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.

POSITIONS OF RESPONSIBILITY

- **Science and Technology Secretary, Student Gymkhana - 2018 - 2019**
  Started a new aerodynamics club, initiated Sci-Tech Week, the longest intra-college event of IIT Hyderabad. conducted tech-talks, various competitions, and a hackathon with a prize pool of 1.5 Lakhs, the highest in the history of SciTech Council.
- 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 Sports Meet 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

FIELDS OF INTEREST

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

(References available on request)