Sasi Kiran Y S S V

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Interests

Computer Vision, Deep Learning, Machine learning and Artificial Intelligence

Education

- **Indian Institute of Technology Madras** — **Chennai**
  Dual Degree(B.Tech + M.Tech) Computer Science and Engineering , 9.53/10 — *2013–2018*
- **Board of Intermediate Education AP** — **Visakhapatnam**
  Maths, Physics, Chemistry, English, Sanskrit, 98.2% — *2011–2013*
- **SSC Examination AP** — **Visakhapatnam**
  Chaitanya Public School, Ukkunagaram, 95.6% — *2000–2011*

Relevant Courses

Electives

- Computer Vision, Computational Photography, Artificial Neural Networks for Computer Vision, Deep Learning, Topics in Deep Learning, Machine Learning, Natural Language Processing, Probabilistic Reasoning in Artificial Intelligence, Data Mining, Foundations of Cryptography, Router Architecture and Algorithms

Core Courses

- Computer Networks, Compilers, Introduction to Databases, Software Engineering, Operating Systems, Computer System Design, Computer Organization, Discrete Mathematics, Data Structures & Algorithms, Automata Theory

Minor in Industrial Engineering

- Fundamentals of Operations Research, Industrial Engineering, Computer Simulations

Projects

- **(Ongoing):** *'Sketch Based Image Retrieval' [Guide: Prof Anurag Mittal]*

  Sketch based image retrieval, similar to image search, involves retrieval of all the relevant images in the database given a user hand drawn sketch as query. Applications are in the fields of fashion industry, information retrieval, etc. The project explores deep generative models in the context of sketch based image retrieval.

- **(Jan-May 2017):** *'Categorization of Human Actions from Videos' [Guide: Prof Sukhendu Das]*

  The aim of the project is to categorize the human actions in videos. The challenges involved include large amounts of variation in videos of each action along with noise and jitter. Features were extracted using multi-skip feature stacking and models like SVM, Neural Networks were experimented for classification. Various dimensionality reduction techniques have also been tried out to improve the accuracy of the model

- **(July-Nov 2016):** *'Question-Answering system : Smarter than an Eighth grader?' [Guide: Prof Sutanu Chakraborty]*

  The goal of the project is to build a system that can answer questions from 8th grade standardized science tests. The project improves over several baselines in literature from NLP and IR. It explores the influence of different knowledge sources on the question answering system. We formulate the retrieval query using query expansion. Different NLP concepts like n-grams, named entity similarities, etc were explored.

- **(July-Nov 2016):** *'Light Field Photography' [Guide: Prof Kaushik Mitra]*

  This project involves exploring the light field imaging and its numerous applications in computer vision. Ray tracer software POV-RAY has been used to synthetically generate Light Field images. Several Applications of light field were explored such as digital refocusing using Fourier Slice Theorem, looking behind an occluded object, depth map estimation using focal stack, etc. An interactive GUI has been developed to visualize light field imaging and its applications.

- **(Feb-May 2016):** *'Source Code Authorship Attribution' [Guide: Prof Balaram Ravindran]*

  The goal of the project is to automatically identify the author of a given source code. This was done by modeling the source code as a generative model using Latent Dirichlet Allocation(LDA). Sampling techniques like Gibbs sampling were used for estimation of model parameters. Explored the influence of punctuations in identifying the author of source code.

- **(July-Nov 2015):** *'JOS Operating System' [Guide: Prof Chester Rebeiro]*

  The project aims at building several kernel modules of the MIT JOS operating system from a basic skeleton. Modules like memory management, segmentation, interrupt handler, scheduling, user environments etc. have been implemented.

Internships

- **Microsoft India** **Hyderabad**
  Software Engineer Intern *June–August 2016*

  I worked broadly in the fields of Business Intelligence and database management.I also developed a tool for handling security aspects of the code bases.

- **My Ally (formerly Skedool.it)** **Remote**
  Software Engineer Intern *Feb–August 2015*

  Skedool is a US based startup that focuses on smart scheduling using Artificial Intelligence and NLP. I worked on developing modules for integration of their personal assistant with Microsoft Outlook and Salesforce.

Technical skills

- **Programming Languages:** Proficient in: C, C++, C# Python, Java, Matlab
- **Tools & Libraries:** Tensorflow, Torch, CUDA, keras, numpy, scipy

Awards & Honours

- **Runner up in Microsoft Data Sciences Challenge** **Hyderabad**
  Data Sciences Meet–Microsoft India *July 2016*
  Part of three member team that came runner up among 102 teams of Microsoft employees in the Ad-click prediction challenge at Microsoft

- **Microsoft Certified SQL Developer** **Hyderabad**
  Microsoft India *July 2016*
  Cleared the 70-461 exam for querying Microsoft SQL Server.

- **JEE Advanced and Mains 2013** **India**
  Indian Institutes of Technology *May 2013*
  Ranked 366 in JEE Advanced 2013 and 151 in JEE Mains 2013 among 150 thousand applicants.

- **KVPY Fellow** **Bhubaneswar**
  MHRD Govt of India *2012*
  The Kishore Vaigyanik Protsahan Yojana (KVPY) is a fellowship program by the Central Government of India to encourage meritorious students to take up research in Science and Technology.

Co-curricular and extra-curricular activity

- Was a part of team that came second in Football and Badminton in department sports meet.
- Was a coordinator for Exebit 2015, the Computer Science department technical fest. Worked with the Prize money team and Events team.
- Was a member of team that secured first place in Puzzle champ, Exebit 2014 and second place in Intra-hostel manual robotics.
- Volunteered for National Social Service(NSS). Was part of team that aimed at providing digital education to rural India.
- Learned Electronic Keyboard till Level-1 and can play some basic songs.

Objective

- Opportunities that expand my technical skills and boost my interests