

Shashank Srikanth

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Education

- 2016-2021 **BTech and MS by Research in Computer Science**, *International Institute of Information Technology, Hyderabad*, **CGPA: 9.69 / 10.0**.
- 2014-2016 **Senior Secondary**, *Amity International School, Saket, Delhi*, **95.8%**.
- 2013-2014 **Secondary**, *Amity International School, Saket, Delhi*, **CGPA: 10.0 / 10.0**.

Scholastic Achievements

- Dean's Merit List** Current Department Rank 2, selected in Dean's Academic Merit List for all the semesters (Awarded to top 5% performers)
- KVPY** Secured rank 560 in Kishore Vaigyanik Protsahan Yojana, a Govt. of India Initiative
- JEE Mains** Secured rank 871 in JEE Mains out of 1.2 million candidates
- ML** Secured top 100 all India rank in FlipkartGrid ML challenge
- Sport Programming** Secured international rank 1 in preelimination round of Codechef Snackdown qualifiers

Publications

- 2019 **INFER: Intermediate representations for future prediction**, *Submitted to IEEE International Conference on Intelligent Robots and Systems (IROS)*.
Under review, First author paper
- 2019 **Driving and Posting: Characterizing Risk-Taking on Social Media**, *International Conference on Computational Social Science (IC2S2)*.
Poster Presentation
- 2019 **Saving Lives One Frame at a Time**, *Workshop on AI and its Impact on Society in Developing Nations, ICVGIP*.
Poster Presentation

Experience

- May 2018 - **Honors Student, Robotics Vision Lab**, *Prof. Madhava Krishna, IIIT-H*.
Present Implemented deep learning models to compute semantic, instance segmentation & disparity maps of outdoor scenes. Designed deep learning models based on LSTMs and CNNs to predict the future trajectory of vehicles in roads given the past trajectory. Tested the above model on real life autonomous driving scenarios present in the KITTI, Cityscapes & Oxford Car dataset
- July 2018 - **Research Project**, *Prof. Ponnurangam Kumaraguru, IIIT-Delhi*.
Present Implemented deep learning models based on 3D Resnets and WideResNets to classify videos as driving & non-driving. Wrote python scripts & scrapers to collect video data from Snapchat Maps using the SnapMaps API. Performed spatial & temporal analysis on the given data. Used transfer learning to train a deep learning based classifier that distinguishes between selfie & non-selfie images.

- Aug 2018 - **Teaching Assistant**, *IIIT-H*.
 Present **Operating Systems & Digital Signal Analysis**: The work involves taking tutorial and lab sessions, explaining concepts of given course to 2nd year undergraduate students
- May 2017 - **Web Development Intern**, *SynapseIndia*, Noida.
 June 2017 Developed a Custom Content Management System using MySQL, PHP & CakePHP. Implemented Payment Gateway using the PayPal API
- Aug 2018 - **Student Developer**, *VLEAD*, IIIT-H.
 Nov 2018 Built reproducible development environments using Vagrant and wrote shell scripts and config files for auto-deploying the various micro-services.

Projects

- Computer Vision** Computed the camera calibration matrix using Zhang's method. Reconstructed the 3D scene up to a scale given multiple views of the scene
- Machine Learning** Performed PCA on the given Faces dataset and computed the eigenfaces. Implemented popular classifiers like Naive Bayes, Softmax etc to classify the faces into different categories. Further designed a simple LSTM based architecture to perform time series prediction of Sine Waves
- AI Bot** Built a bot for playing 4*4*4*4 ultimate tic-tac-toe using algorithms such as minimax and alpha-beta pruning. Implemented custom heuristics, caching, iterative deepening search, caching etc. The bot placed **third** in the Bot championship conducted
- Bash Shell** Developed a shell in C using POSIX system calls. Implemented features like killing a process, input/output redirection, piping and signal handling
- Database Engine** Implemented a mini SQL engine that supported various SQL operations like select, join & where clause.
- Networks** Implemented a client server architecture using sockets with both persistent and non persistent connections. Also developed a proxy server with features such as threading, LRU caching, non-blocking etc.

Technical Skills

- Advanced** Python, C, C++ (STL), Javascript, MATLAB, PyTorch, HTML/CSS
- Intermediate** Flask, SQL, Scikit-learn, Numpy, Matplotlib, Selenium
- Worked Previously** Tensorflow, OpenGL, WebGL, Caffe

Courses

- Research Stream** Robotics & Computer Vision, Machine Learning, Deep Learning, Optimization Methods *, Big Data *
- Computer Science** Data Structures, Algorithms, Databases, Software Design, Artificial Intelligence, Graphics, Operating Systems, Computer Networks, Formal Methods, Digital Signal Analysis, Digital Logic Design, Computer Architecture
- Mathematics** Linear Algebra, Probability, Graph Theory, Group Theory, Differential Equations *, Complex Analysis