Suyash Shukla

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Education

Indian Institute of Technology Varanasi — *Varanasi, India*

B.Tech. and M.Tech. in Computer Science and Engineering — *July 2016 - PRESENT*

- Cumulative Performance Index(CPI) 9.29/10

Technical Skills

Programming Languages	C, C++, Python, Java, MySQL, Bash, Painless
Web Development	HTML, CSS, Bootstrap, Django, Spring, Hibernate
Software Skills	git, Matlab, GNU Octave, LaTeX
Technologies	AWS, Apache Hadoop, Apache Spark, SnappyData, ElasticSearch, Athena

Technical Experience

Summer Research Intern — *Changwon National University, Republic of Korea*

Imaging Systems Laboratory, Prof. Oh Seol Kwon — *May 2018 - July 2018*

- Speed Limit Sign Recognition for Korean speed signs using OpenCV in C++ language.
- Used Haar cascade classifier for speed limit sign detection and Centroid-to-Contours features for speed limit recognition to achieve real-time performance.
- Image Super Resolution: Comparative study of recent deep learning approaches like Generative Adversarial Networks and Convolutional Neural Networks for Super Resolution.
- Exposure: Computer Vision, Machine Learning, Deep CNNs, OpenCV for C++

Research Intern — *Adobe India, Noida*

Personalization@Adobe — *May 2019 - July 2019*

- Worked with team Sophia at Adobe Noida on Sizing of Audience targeted by a campaign lodged by Sophia
- Used ARIMA model for time-series analysis and frameworks like Apache Spark, Apache Hadoop, SnappyData and ElasticSearch to implement the query engine.
- Optimized the data storage and query engine. The queries which took around 2 hours were now being run in a minute using similar cluster architecture.
- Exposure: AWS, Time Series Analysis, Apache Spark, Apache Hadoop, Athena, ElasticSearch, SnappyData

Academic Projects

Actionable Knowledge Extraction from Boosted Trees — *IIT (BHU) Varanasi*

B.Tech Project, Dr. Bhaskar Biswas — *Jan 2019 - Present*

- Extraction of actionable knowledge (prescriptive analysis) from boosted tree models like Random Forest
- Implemented the algorithm to change the features of any ML problem in the most optimal way such that the decision variable changes to the required value.
- Exposure: Boosted Trees, Integer Linear Programming, Optimization Problems

An Efficient Segmentation Based Pipeline For Image Inpainting — *IIT (BHU) Varanasi*

Exploratory Project, Prof. Rajeev Srivastava — *Jan. 2018 - May 2018*

- Comparative analysis of methods like Generative Adversarial Networks and classical patch based and exemplar based methods for Image Inpainting.
- Implemented a pipeline that performs foreground-background segmentation and uses GAN for filling holes in foreground to generate novel features and uses patch based method for filling holes in background to utilize redundant background features.
- Exposure : Machine Learning Algorithms, Image Processing, Deep learning, Python Libraries- Scipy, Numpy, Sklearn, Keras, Matplotlib, Tensorflow

Automated localization of fiducial markers in CT/MRI images. *BARC (in association with Inter-IIT Tech Meet)*

PROJECT FOR INTER-IIT TECH MEET 2018 *Dec. 2017*

- Localized fiducial markers (used for neuro-registration of a patient) and locate their 3D coordinates in CT scan images for brain, PVC skull and three different phantoms of different geometries.
- Implemented using classical Image Processing techniques and unsupervised clustering techniques.
- The project was open for all IITs and was framed as an event at Inter-IIT Tech Meet, 2018 held on 5-7 January at IIT Madras, in which, we got placed 3rd among all IITs.
- Exposure: Image Processing Techniques, Unsupervised Learning

Semantic Segmentation of Satellite Images *Inter-IIT Tech Meet, IITB*

PROJECT FOR INTER-IIT TECH MEET 2019 *Dec 2018*

- Worked on semantic segmentation of satellite images for land classification task.
- Trained DeepLab model proposed by Google and obtained more than 90 percentage per-pixel accuracy for every class.
- Exposure: DeepLab, CNNs built on Atrous Convolutions

Achievements/Extra Curriculars

- Got AIR 803 in JEE Advanced 2016 with a percentile of above 99.9.
- 3rd place at Inter-IIT Tech Meet, IITM 2018, among all IITs for the event – Automated fiducial localization in CT scans.
- Placed among top 10 teams in PanIIT AI Hackathon Round 1
- Events head at Codefest, 2019, the annual coding fest organized by Dept. of CSE, IIT BHU
- Qualified for ACM ICPC regionals with rank 63.
- Got World Rank 10 in Student Hunt 2017 (Data Science Hackathon conducted by Analytics Vidhya)
- Achieved Global Rank 32 in GS-Quantify, an ML hackathon
- Participated in various hackathons like Code.fun.do
- Active member of Club of Programmers, IIT(BHU) Varanasi

Personal Details

Full Name	Suyash Shukla
Father	Tarkeshwar Prasad Shukla
Mother	Anita Shukla
Date of Birth	25 October, 1997
Nationality	Indian
Gender	Male
Language(s)	English, Hindi