Siddhartha **Saxena**

http://siddsax.github.io

EDUCATION

IIT KANPUR

B.Tech in Computer Science
Expected April 2019 | Kanpur, India
Cum. GPA: 9.23

VBV, KOTA

Grad. May 2011 | Kota, India
AISSCE 2015: 93.8%

LINKS

Github:// **siddsax**
LinkedIn:// **siddsax**
Twitter:// **@siddsax**
Quora:// **Siddhartha-Saxena**

COURSEWORK

Bayesian Machine Learning
Machine Learning Techniques
Data Structures and Algorithm
Logic in Computer Science
Probability and Statistics
Differential Equations
Unix Tools and Scripting

SKILLS

PROGRAMMING

Torch • Lua • Tensorflow • Matlab
OpenCV • Java • Python • C++ • LaTeX
C • Numpy • HTML/CSS • Octave
Arduino IDE • Github • Verilog •
Assembly

EXTRA-CURRICULAR ACTIVITIES

Editor, VOX POPULI | Journalism body of IIT Kanpur

- Moved Vox closer to people with articles voicing the opinions of the campus community.
- Lead articles on pressing issues like problems of PhD students, effect of coaching on IIT undergrads (published on **Business Insider** and **Times of India**) , statistical analysis of World University Rankings.

Google Developer's Group

- Gave a talk on Computer Vision and its application in Robotics, attended by **more than 50 peers and juniors** .

INTERNSHIP

ENVESTNET YODLEE | Instance Selection in Big Data

Mentored by Dr Om Deshmukh, Director, Data Science | Bangalore | May 2017 - July 2017 | Report*

- Formed a data-driven Instance Selection approach to significantly enhance the generalizability of all Data Science models implemented by the company.
- Tackled the highly complex problem via an efficient on-line clustering model in spark with growing number of clusters undercutting the problem of Big Data.

SELECTED PROJECTS

IMPLEMENTING CGANS FOR DEPTH ESTIMATION FROM STEREO IMAGES | Undergraduate Project mentored by Prof. Vinay Namboodiri | December 2016 - Present | Code* | Report*

- Producing Kinect-like depth estimates from stereo images, training cGANs on Berkeley 3-D Object Dataset.
- Implementing the paper titled "Image-to-Image Translation with Conditional Adversarial Networks" in Torch which uses newly developed **GANs** framework for generating a particular image.

IMPROVING VARIATIONAL INFERENCE MODELS VIA NORMALIZING FLOWS | Course Project mentored by Prof. Piyush Rai | January 2016 - April 2017 Code* | Report*

- Implemented Variational Auto-encoders with Normalizing Flows for generating handwritten numbers.
- Produced richer latent representations in Variational Auto-encoders.

INTERACTIVE BAYESIAN DOCUMENT CLUSTERING | Course Project under Prof. Piyush Rai | August 2016 - November 2016 | Code*

- Built a clustering model from scratch invoking user feedback via a cycle of rejection/acceptance.
- Built a user feedback document clustering model, clustering documents according to the topics contained in them, extracted through LDA.

AUV-IITK (AUTONOMOUS UNDERWATER VEHICLE) | Software Subsystems under Prof. K.S Venkatesh and Prof Sachin Y Shinde | December 2015 - December 2016 | Code*

- Built **Institute's first** AUV. A vehicle capable of following distinctly-colored lines, shoot torpedoes and drop markers autonomously using sensor data and computer vision, which has been integrated using Robot Operating System **(ROS)** .
- Applied Pose Detection via SIFT and SURF Descriptors for an L-shaped gate, identifying the angle made by it.
- Applied CNNs for pattern detection using Tensorflow.

AWARDS AND FELLOWSHIPS

- **Academic Excellence Award** at IIT Kanpur for the year 2015-16.
- **First runner-up** in the National Autonomous Underwater Competition, SAVe-NIOT (2016) in debut attempt among **17** top Indian Colleges.
- Received the prestigious KVPY fellowship 2015 given to **only 400** students in science stream from all over India.