



Akarsha Sehwaag



aksh98.github.io



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Education

B.Tech | Computer Science Engg
IIIT Delhi | 2019 | GPA:7.6/10

(Courses - Machine Learning, Natural language Processing, Digital Image Processing, Advanced Biometrics, Collaborative Filtering, Virtual reality)

Senior Secondary Board (Class XII)
Delhi Public School | 2015 | 92 %

Secondary Board (Class X) | 10/10

Skills

TOOLS AND TECHNOLOGIES:

Pandas • Pytorch • Tensorflow •
OpenCV • Git • GeoPandas • PySpark •
Sklearn • MongoDB • Kafka • Kibana •
MySQL • Hadoop HDFS • Elasticsearch
• WEKA • AutoCAD • H3 • Spark RDD

PROGRAMMING LANGUAGES:

Python • C • C++ • Java • \LaTeX • SQL

SPOKEN LANGUAGES :

English, Hindi, German(B1 level)

Achievements

- Dean's Award for "Innovation in Research and Development".
- Scholarship worth \$2800 for attending ElasticON in San Francisco.
- Google GHCI Scholarship '19.
- Academic Excellence Award(School)
- School Topper in NSTSE (Top 300 All India Rank).

Extra-Curricular

- Organizer | Django Girls, Lisbon
- Community Organizer | Elastic, Delhi
- Core Team | PyLadies, LinuxChix
- Coordinator | Adventure Club
- Badminton Captain | Sports Council
- Event Head | Tech-fest'17
- Organizing Team | Tech-Fest'16

Work Experience

June'19 - Now **Associate Data Scientist | Airtel X Labs, Delhi**

- Recharge amount, time & mode Prediction from User behaviour based on his data usage, call patterns, recharge trends etc.
- Built the complete pipeline for Customer Segmentation (from feature engineering up until production level) of more than 300 Million users to personalize product recommendation and focus customer interaction; reducing 7M interactions to 0.1M relevant ones/day & simultaneously increasing revenue per user.
- Identification of User Employment-Type by using SMS headers, call records, travel pattern etc. for targeted marketing campaigns.

Jan-Mar'19 **Artificial Intelligence Intern | UnternehmerTUM, Munich**

- Created a working prototype of our product, that lets foreign tourists experience a city based on their interests through tours guided by an autonomous (Level 4) car.
- Implemented Agile development principles along with design thinking, user story mapping & solution validation methodologies.
- Communicated cross-functionally in a diverse team and drove the engineering efforts in the team.

Sponsors: Audi, BMW and ADAC. *Reference: [Dr. Afsaneh Asaei](#)*

May-Dec'18 **Data Science Intern | Stanford University**

- Predict time series data on national level and map it to all the states. Achieved state-of-the-art results. (Journal in writing)
- Predicted change in contribution and productivity of STEM workers in the financial sector using NLP models. *Reference: [Dr. Christos](#)*
- Worked with Prof. Prithwiraj Choudhury from Harvard Business School on the analysis & predictions of salary variations with respect to countries and companies.

Jan-Dec'18 **Undergrad Researcher | Image Analysis and Biometrics Lab**

- Achieved state-of-the-art on deceiving Face PAD algorithms. (More than 30% improvement in the accuracy/PAD error rate.)
- Worked on Attribute Classification in Low-Resolution images.
- Developed a new architecture of GANs to input two images and generate morphed images. | Advisors: [Dr. Richa](#) & [Dr. Mayank](#)

May-Dec'17 **Chief Operations Officer | Invadex, Delhi**

- A Machine Learning based SaaS product - Alongside product development, responsible for evaluating internal workforce.
- Represented it in Web Summit'17 (Portugal) and got investment offer of \$0.5 million.

Publications

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|------|--|
| 2019 | Deceiving the Protector: Fooling Face Presentation Attack Detection Algorithms
IAPR International Conference on Biometrics, Greece |
| 2019 | Deceiving Face Presentation Attack Detection via Image Transforms
IEEE International Conference on Multimedia Big Data, Singapore |
| 2018 | Rise of the "Quants" in Financial Services: Regulation and Crowding Out of Routine Jobs
(Acknowledgment) |

Projects

- **Detecting Combined Identities:** Used GANs to generate morphed images/videos and Deep Learning models like VGG'16 to detect forgery.
- **Github User Recommendation system:** Recommended Github users for Github Projects/Organizations based on the user's activities in Github & StackOverflow.
- **Audio Super-Resolution:** Used 5 Machine Learning models (GANs, Hidden Markov Model, AutoEncoder, Convolutional Neural Network and Long Short-Term Memory Network) to generate a high resolution signal from a low resolution audio with a smaller sampling rate.
- Other Machine Learning / Development projects listed here: [\[Github Link\]](#)