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Somin Wadhwa

Contact Information

Undergraduate Student
Block 1, Computer Science & Engineering
Maharaja Agrasen Institute of Technology
Sector 22, Rohini
Delhi, India.

Phone: (+91) 9312349897
E-mail: sominwadhwa@gmail.com
GitHub: sominwadhwa
Blog/Homepage: swadhwa.me
Kaggle: sominwadhwa
LinkedIN: /in/sominwadhwa

Interests

Deep Learning, Applied Machine Learning, Statistical Data Analysis

Education

B.Tech in Computer Science & Engineering — July 2014 – present
Maharaja Agrasen Institute of Technology — (Percentage: **78.4%** as on July 2017)
Guru Gobind Singh Indraprastha University, Delhi, India

Sr. Secondary: Bal Bharati Public School, Pitampura, Delhi — March 2012 – April 2014
All India Senior School Certificate Examination, CBSE — (Percentage: **93.8%**)
Secondary School: Bal Bharati Public School, Pitampura, Delhi — March 2000 – April 2012
CBSE — (GPA: **8.8/10**)

Recent Experience

Research Intern — May, 2017 - Present
Complex Systems Lab@ IIIT-Delhi — Principal Investigator: Dr. Ganesh Bagler
During the course of summer '17 we worked on a project involving prediction of side effects using existing data (SIDER4) by leveraging machine learning with statistical data analysis. The entire work has been consolidated, documented & open-sourced on github (drugADR).

Research-Presentation — 2-5 December, 2015
XXVII IUPAP Conference on Computational Physics — IIT Guwahati
Gave an oral talk on, "Study of Random Numbers & their applications in computational physics using Monte-Carlo method". (Abstract)(Certificate)

Technical Skills

Strongest Areas: Machine Learning (Classification, Regression, Feature Engineering), Algorithms, Statistical Data Analysis
Languages/Tools/Software: Python (scikit-learn, Keras, NumPy, Pandas & others), Java, SQL, MongoDB, LaTeX, MS Excel

Selected Projects

VQAMD*
A semester long project (currently half way through) based on the Virginia Tech's VQA (Version 2). Idea is to design a CNN + LSTM based model whose outputs are passed through a fully connected followed by softmax layer to improvise the overall accuracy on v2 release of VQA.

drugADR
An open sourced consolidated version of the work done during my Summer Internship at IIIT-Delhi. The idea behind this research project was to leverage machine learning to predict phenotypic side effects of drugs using their chemcical properties.

Kaggle-Repository*
A collection of kernels (written in IPython Notebooks & scripts) designed from datasets obtained from Kaggle for practise as well as competitions. These include implementations of typical Machine Learning algorithms on a range of datasets.

TheTwitterPolice
Analysis of law enforcement activity on Twitter in India. Collected data from five different police social handles (BeautifulSoup & Selenium), stored them in a database (MongoDB), analysed (sentiment-analysis, time-series etc) & displayed the results graphically in the form of a web-app (flask application deployed on heroku).

Image Apportionor
A simple clustering based image segmentation in Python. Implemented k-means clustering for segmentation & achieved a compression ratio of approximately 6.

**Ongoing*

All my projects (above included) are be available on GitHub

Other Activities	• Won Smart India Hackathon (April 2017) Lead a six-member team under the mentorship of Dr. Sambuddha Roy over a period of three months to build a decision support system using Machine Learning to improvise AICTE's handbook approval system for technical institutions in India for SIH – 7200+ teams pan India competed in a 36-hour Hackathon organised by Government of India. As a part of the winning team for AICTE, I'm associated with All India Council for Technical Education (Ministry of Human Resources & Development, Government of India) in a fully funded project (Budget: 2.93L) for taking our prototype forward over the period of 6-8 months beginning September 2017. • **Secretary**(2015-2016) 'Association of Computing Machinery (ACM)- Student Chapter' at M.A.I.T • **Interned** at a national NGO 'Umeed - A drop of Hope' (NGO Reg: S/792/DIST.SOUTH/201) and participated in Project- Knowledge for All (KFA). • **Rotaractor** (2014-2015) Member of 'Rotaract Club of Delhi Akash' where our team jointly organized several large scale events like 'CanSupport's Walk of Life (8th Feb 2015) - Fight against cancer.', 'Patrika - A paper recycling drive.'
Relevant Courses Taken	Algorithms, Data Structures, Databases, Machine Learning (MOOC), Automata Theory, Theory of Probability, Differential & Inferential Statistics (Applied Math-IV), Software Engineering
Hobbies & Interests	Reading, Blogging, Basketball, Running.
References	Available upon request.