

# Somin Wadhwa

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CONTACT INFORMATION	Undergraduate Student Block 1, Computer Science & Engineering Maharaja Agrasen Institute of Technology Sector 22, Rohini Delhi, India.	Phone: (+91) 9312349897 E-mail: <a href="mailto:sominwadhwa@gmail.com">sominwadhwa@gmail.com</a> GitHub/Kaggle: <a href="#">sominwadhwa</a> Homepage: <a href="https://sominwadhwa.github.io">sominwadhwa.github.io</a>
INTERESTS	Deep Learning, Applied Machine Learning, Statistical Data Analysis	
EDUCATION	<b>B.Tech in Computer Science &amp; Engineering</b> July 2014 – present Maharaja Agrasen Institute of Technology (Percentage: <b>77.6%</b> as on July 2017) Guru Gobind Singh Indraprastha University, Delhi, India  <b>Sr. Secondary:</b> Bal Bharati Public School, Pitampura, Delhi March 2012 – April 2014 All India Senior School Certificate Examination, CBSE (Percentage: <b>93.8%</b> ) <b>Secondary School:</b> Bal Bharati Public School, Pitampura, Delhi March 2000 – April 2012 CBSE (GPA: <b>8.8/10</b> )	
RECENT EXPERIENCE	<b>Undergraduate Researcher</b> May, 2017 - Present Complex Systems Lab@ IIIT-Delhi 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 ( <a href="#">drugADR</a> ).	Principal Investigator: <a href="#">Dr. Ganesh Bagler</a>
PUBLICATIONS	<b>Wadhwa S</b> , Gupta A, Dokania S, Kanji R, Bagler G (2018) A hierarchical anatomical classification schema for prediction of phenotypic side effects. PLOS ONE 13(3): e0193959. <a href="https://doi.org/10.1371/journal.pone.0193959">https://doi.org/10.1371/journal.pone.0193959</a>	
SELECTED PROJECTS	<b>VQAMD</b> A semester long project based on the Virginia Tech's <b>VQA</b> (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. The entire methodology is documented under a blog- <a href="#">Visual Question Answering through Modal Dialogue</a> <b>drugADR</b> 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 chemical properties. <b>Kaggle-Repository*</b> 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. <b>TheTwitterPolice</b> 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). <b>Image Apportionor</b> A simple clustering based image segmentation in Python. Implemented k-means clustering for segmentation & achieved a compression ratio of approximately 6. <i>*Ongoing</i> All my projects (above included) are available on <a href="#">GitHub</a>	
TECHNICAL SKILLS	<b>Strongest Areas:</b> Machine Learning (Classification, Regression, Feature Engineering), Algorithms, Statistical Data Analysis <b>Languages/Tools/Software:</b> Python (scikit-learn, Keras, NumPy, Pandas & others), Java, SQL, MongoDB, L <sup>A</sup> T <sub>E</sub> X, MS Excel	

OTHER ACTIVITIES	<ul style="list-style-type: none"> <li>• <a href="#">Won Smart India Hackathon</a> (April 2017) I was the Team Lead of a six-member team under the mentorship of <a href="#">Dr. Sambuddha Roy</a> 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 <a href="#">SIH</a> – 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 &amp; Development, Government of India) in a fully funded project (<b>Budget: 2.93L</b>) for taking our prototype forward over the period of 6-8 months beginning October 2017.</li> <li>• <b>Secretary</b>(2015-2016) 'Association of Computing Machinery (ACM)- Student Chapter' at M.A.I.T</li> <li>• <a href="#">Presentation</a> Gave an oral talk on, "Study of Random Numbers &amp; their applications in computational physics using Monte-Carlo method" at the 27<sup>th</sup> IUPAP Conference on Computational Physics, <b>IIT Guwahati</b> on 2-5 December, 2015.</li> <li>• <b>Interned</b> at a national NGO 'Umeed - A drop of Hope' (NGO Reg: S/792/DIST.SOUTH/201) and participated in Project- Knowledge for All (KFA).</li> <li>• <b>Rotaractor</b> (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.'</li> </ul>
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, <a href="#">Blogging</a> , Basketball, Running.
REFERENCES	Available upon request.