

Somin Wadhwa

CONTACT INFORMATION

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EDUCATION

Bachelor of Technology in Computer Science & Engineering

Maharaja Agrasen Institute of Technology

Guru Gobind Singh Indraprastha University, Delhi, India

2014 – 2018

CPI: **79.2%**

RECENT EXPERIENCE

• Indraprastha Institute of Information Technology, Delhi (IIIT-D)

Research Intern

July, 2018 - Present

Complex Systems Lab, Center for Computational Biology

June 2017 - March 2018

Advisor: [Dr. Ganesh Bagler](#)

– **Current Work:** My current work focuses on creation of *“BitterSweet: A resource to explore and predict taste information in small molecules”*. (<http://cosylab.iiitd.edu.in/bittersweet>)

– **Previous Work:** Pursued an internship where I worked on devising new methods to predict phenotypic side effects of drugs using existing data (SIDER4 & DrugBank). The problem was formulated as an extreme multiclass-multilabel classification problem with severe class imbalance in the datasets. The work conducted was culminated in the form of a research article (published) and the code was documented & is now open-sourced on Github ([code](#)).

• All India Council for Technical Education (AICTE), Govt. of India

Research & Development Intern

October 2017 - March 2018

Advisor: Dr. N.H. Siddalingaswamy (Director, AICTE)

– **Work:** Lead a team of 5 and with a project budget of \$4600. We analysed AICTE’s employment statistics dataset and developed dynamic analytic dashboards to aid AICTE in granting approvals to higher education institutions. ([code](#))

PUBLICATIONS

- Tuwani R, **Wadhwa S**, Bagler G (2018) BitterSweet: Building machine learning models for predicting the bitter and sweet taste of small molecules. bioRxiv 426692 (*preprint*)
doi: <https://doi.org/10.1101/426692>
- **Wadhwa S**, 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
doi: <https://doi.org/10.1371/journal.pone.0193959>

SELECTED PROJECTS

All of my projects (including the following) are available on github.com/sominwadhwa

- **Visual Question Answering through Modal Dialogue:** A semester long B.Tech project based on the application of *Malinowski et al.* (Ask Your Neurons) on v2 of the VQA dataset released in April 2017. I have also documented and made the entire process reproducible with a single click in the form of a [featured blog post](#). ([code](#))
- **Kaggle Repository:** An ongoing (2+ years) collection of kernels (implemented using IPython notebooks) designed using datasets obtained from Kaggle for practise as well as competitions. Demonstrates implementation of several algorithms and data visualization techniques. ([github-repo](#), [kaggle profile](#))
- **TheTwitterPolice:** A basic analysis & visualization of the Indian law enforcement activity on Twitter. Collected data for different cities (BeautifulSoup & Selenium), stored them in a database (MongoDB), analysed (sentiment analysis, basic statistics etc) & displayed the results graphically through a flask web-app. ([code](#))

SKILLS

- **Languages:** Python (proficient), Java (familiar), bash scripting, SQL, L^AT_EX.
- **Frameworks & Libraries:** Tensorflow, keras, PyTorch, scikit-learn, SpaCy, NLTK, Matplotlib, Plotly, MongoDB, Flask.
- **Relevant Classes Taken:** Algorithm Design & Analysis, Machine Learning, Advanced DBMS, Data Structures, Probability & Curve Fitting (Applied Mathematics-IV)

ACHIEVEMENTS &
OTHER ACTIVITIES

- **Smart India Hackathon 2017, MHRD, Govt. of India:** Led a team of 6-members advised by Dr. Sambuddha Roy (Principal Data Scientist at Microsoft, Seattle) & won first prize with a total cash prize of \$3000 awarded by Government of India and MAIT.
- **Best B.Tech Project:** Awarded to the top 4 major projects by the CSE department at MAIT.
- **Outstanding Achievement Award:** Conferred by the CSE department at MAIT among 180 students (batch of 2018).
- **Secretary, Association of Computing Machinery:** Served in the capacity of Secretary of 80+ strong team of ACM-MAIT Student Chapter during 2015-2016.
- **Blogging:** Maintain an active blog at *sominwadhwa.github.io/blog* to document some of my experiences & selected projects (for reproducibility).