Sachin Grover

PhD Student in Computer Science

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Education

Current **PhD Student**, *Computer Science*, Carnegie Mellon University.

2016–2018 **Masters of Science**, *Computer Science*, University of Maryland, College Park, *GPA – 4.0/4.0*.
Relevant Coursework: Computational Genomics, Machine Learning, Computational Linguistics

2012–2016 **Bachelor of Technology**, *Computer Science*, Indian Institute of Technology, Jodhpur, *GPA – 9.54/10*.
- Relevant Coursework: Beyond NP completeness, Socio-Economic Networks, Operating Systems, Algorithm Design
- **B.Tech.Thesis**: Performance Centric Bandwidth Allocation for Data Parallel Applications. The problem was designed as a combinatorial optimization problem for the scenario of private datacenters. The placement of tasks on servers along with bandwidth utilization were optimized with weighted fairness constraints

Research Experience

2016-2018 **Graduate Research Assistant**, University of Maryland, College Park.
Mentor: Prof. V.S. Subrahmanian
- Worked on a project to design a model-agnostic explanation engine for binary classifiers to generate natural language (English) balanced explanations (evidence *for and against* the predictions)
- Integrating this engine with different classifiers to come up with a behavioral model for terrorist groups

Summer 2015 **Summer Research Intern**, Georgia Institute of Technology, Atlanta.
Mentor: Prof. Dr. Bistra Dilkina.
- Focused on finding novel heuristic approaches for *branching* in Branch and Bound in MIP solver
- Designed variable selection strategies based on Multi-armed bandit approach (Pseudocost scores treated as surrogate for rewards)
- Implemented using CPLEX callable libraries (C API) and results were compared to well-established heuristic of Pseudocost based branching and Strong branching

Work Experience

Summer 2019 **Data Science Intern**, The New York Times, New York.
Worked on a project to identify and characterize evergreen articles published by the Times using the article specific timeseries characteristics and the textual content

Summer 2018 **Data Analyst Intern**, Focusvision Worldwide Inc, New York.
- Worked on a social listening tool to track overall brand health and assist marketing campaigns to assess the impact of different market research strategies
- The tool uses an assortment of text analytics technique applied on multiple data sources (pertaining to a brand) to generate interpretable actionable insights.

Publications

2019 **S Grover**, C Pulice, G Simari, VS Subrahmanian. BEEF: Balanced English Explanations for Forecasts
IEEE Transactions on Computational Social Systems.

2019 A Horvath, **S Grover**, S Dong, E Zhou, F Voichick, MB Kery, S Shinju, D Nam, M Nagy, BA Myers.
The Long Tail: Understanding the Discoverability of API Functionality
IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC), 2019

Awards

2016 Awarded President's Gold Medal (**President of India Prize**) for the best academic performance in the graduating class of 2016 among B.Tech. programs of all disciplines at IIT Jodhpur

2016 Awarded Chairman, Board of Governors Prize for the best academic performance in the graduating class of 2016 of B.Tech.(Computer Science and Engineering) Program at IIT Jodhpur

2015 Selected for the CRUISE program at the School of Computational Science and Engineering, Georgia Tech

Other Projects

- **Texture Synthesis** Devising Evaluation schemes for textures synthesized using variational and adversarial Autoencoders
- **Detecting Cyberbullying on Twitter** An ensemble of classification models to identify and categorize cyberbullying on Twitter based on Gender, ethnicity or mental health.
- **Digitization Database** Refactored the database for Georgetown Law Library's Digitization Initiative to achieve extensibility
- **Transliteration** A neural network model to perform the task of multilingual transliteration.
- **Extending IUIPC** Constructed a new contemporary privacy concerns scale followed by an M-turk study for consistency analysis