VASHIST AVADHANULA

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RESEARCH INTERESTS

revenue management, data driven choice modeling, machine learning, robust optimization, business analytics

EDUCATION

2013 - Present   **Columbia University**, New York, NY

PhD candidate in **Decision, Risk & Operations**, Graduate School of Business

Advisors: Assaf Zeevi, Vineet Goyal and Shipra Agrawal

2008 - 2013   **Indian Institute of Technology Bombay**, India

B.Tech in Electrical Engineering and M.Tech in Communications and Signal Processing

Thesis: Selective node labeling in social networks, Advisor: Sunita Sarawagi

PUBLICATIONS

1. Shipra Agrawal, <u>Vashist Avadhanula</u>, Vineet Goyal and Assaf Zeevi. MNL-Bandit: A dynamic learning approach to assortment selection. Under Review (2nd round), Operations Research.

2. Shipra Agrawal, <u>Vashist Avadhanula</u>, Vineet Goyal and Assaf Zeevi. Thompson Sampling for the MNL-Bandit. In Conference on Learning Theory (COLT), 2017. Journal version in preparation.

3. Shipra Agrawal, <u>Vashist Avadhanula</u>, Vineet Goyal and Assaf Zeevi. A near-optimal algorithm for exploration-exploitation approach for assortment selection. ACM Conference on Economics and Computation, 2016.

4. <u>Vashist Avadhanula</u>, Jalaj Bhandari, Vineet Goyal and Assaf Zeevi. On tightness of LP relaxation for rational optimization and its applications. Operations Research Letters, 2016.

5. Gaurish Chaudhari, <u>Vashist Avadhanula</u>, and Sunita Sarawagi. A few good predictions: Selective node labeling in a social network. In WSDM, 2014.

SELECTED AWARDS AND SCHOLARSHIPS

- 2016 W.E. Deming Doctoral Fellowship: $10,000 grant for research projects bridging theory and practice.
- 2015-16 Werner L. and Adriana Chilton Doctoral Fellowship: awarded to one doctoral student on the basis of overall achievement in the program and potential to conduct quality research.
- Doctoral Fellowship, Columbia Business School, 2013-2018.
- Certificate of Merit: Indian National Physics Olympiad, Indian National Astronomy Olympiad - 2008
- Only undergraduate selected for the Advanced Instruction School on Numerical Linear Algebra - 2010
- IIT Bombay Heritage Fund Scholarship - 2009 & 2010

PROFESSIONAL EXPERIENCE

Columbia University/Flipkart, Research Consultant, New York (Ongoing)

Collaborating with Search and Discover teams at India's leading ecommerce firm. We are developing a framework to understand user click/purchase behavior and improve product recommendations.

Flipkart, Research Intern, Bangalore (July - September, 2016)

I developed optimization models to improve Flipkart's supply chain network and warehouse load management. My model reduced the average delivery times by **20**% and is currently being adopted into the firm's practices on national scale.

Opticlose, Data Science Consultant, New York (July - October, 2015)

Consultant for the data science team at opticlose, a New York based startup company, where I developed models that predict and schedule successful sales calls.

SONY, Systems and Software Engineering Intern, Tokyo (May-July, 2011)

Artistic Photo Rendering: Implemented an algorithm to create a painting analog of any digital picture.

TEACHING EXPERIENCE

Columbia University, Graduate School of Business

– EMBA Business Analytics, Teaching Assistant.	Spring 2016
– Operations Management, Teaching Assistant.	Spring 2015
– Managerial Statistics, Teaching Assistant.	Spring 2013, 2014
– Quantitative Pricing & Revenue Analytics, Teaching Assistant	Fall 2015, 2016

Columbia University, Department of IEOR

– PhD Optimization I, Course Assistant.	Fall 2015, 2016

Indian Institute of Technology Bombay, Department of Electrical Engineering

– Introduction to Probability and Random Processes, Head Teaching Assistant.	Fall 2012
– Probabilistic Graphical Models, Teaching Assistant.	Spring 2012

SELECTED TALKS

"Dynamic Learning in Assortment Selection - Thompson Sampling Approach"

– INFORMS APS Meeting, Kellogg School of Management, Evanston, IL.	July 2017
– Third Workshop on Marketplace Innovation, Stanford University, Stanford, CA.	May 2017

"Attribute Based Dynamic Learning Approach to Assortment Selection"

– MSOM Conference, UNC Kenan-Flager Business School, Chapel Hill, NC.	June 2017

"A Near-Optimal Exploration Exploitation Approach to Assortment Selection"

– Young Researchers Workshop on Data Driven Decision Making, Cornell ORIE.	October 2017
– INFORMS Annual Meeting, Nashville TN.	November 2016
– MSOM Conference, University of Auckland, Auckland, NZ.	June 2016
– Revenue Management and Pricing Conference, Stern School of Business, New York, NY.	June 2016

"On Tightness of an LP relaxation for Rational Optimization"

– Trans-Atlantic Doctoral Conference, London Business School, London, UK	May 2016

REFERENCES

Professor Assaf Zeevi
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Professor Vineet Goyal
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