

Deependra Singh

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RESEARCH INTERESTS	Computational Genomics, Data Mining, Machine Learning	
WORK EXPERIENCE	Groupon Data Scientist, <i>Search, Data Mining & Personalization</i> Responsible for enhancing and integrating query-category Click Model into Groupon search engine, including deployment, effectively moving search relevance banding from manual to machine learnt, and registering millions of dollars of revenue increase.	Palo Alto, CA Oct 2015 – Present
	Groupon Data Scientist, <i>Data Science</i> Involved in building machine learnt models for demand forecasting, identifying the right category and price assortments, and user email engagement prediction for European markets. In addition, conducted various user behavior studies using statistical methods to identify actionable business insights for these markets.	Chennai, India Jun 2014 – Sep 2015
	Zumbl Software Developer Intern Designed and developed user features based personalization algorithms and credit based market system for a social network start-up.	New Delhi, India Summer 2013
EDUCATION	Indian Institute of Technology Delhi B.Tech. in Computer Science & Engineering	New Delhi, India Jul 2010 – May 2014
OTHER COURSES	University of California Santa Cruz – Silicon Valley Extension <ul style="list-style-type: none">Next Generation DNA Sequencing: Methods & Applications (Received Highest Grade)Predictive Analytics: Applications of Machine Learning (Received Highest Grade) Coursera – Massachusetts Institute of Technology (MIT) <ul style="list-style-type: none">Introduction to Biology by Prof. Eric S. Lander (Received Passing Grade)	Santa Clara, CA Fall 2016 Fall 2016 Online Fall 2016
PUBLICATIONS	<i>Deependra Singh</i> , Vinay Deolalikar: “Automating Relevance Banding in eCommerce Search using Click Model”. 39th European Conference on Information Retrieval (ECIR 2017). [Submitted, Under Review] abstract-pdf <i>Vinay Deolalikar</i> , <i>Deependra Singh</i> : “How Informative are the Concept Associations Discovered by a Document Cluster?”. 21st Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2017). [Submitted, Under Review] abstract-pdf <i>Neeraj Pradhan</i> , <i>Vinay Deolalikar</i> , <i>Deependra Singh</i> : “Islands of Interest: Mining Concentrations of User Search Intent over E-commerce Product Categories”. 21st Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2017). [Submitted, Under Review] abstract-pdf <i>Vinay Deolalikar</i> , <i>Deependra Singh</i> : “Can Econometrics Answer When High Dimensional Text Clusters have Short Signatures?”. 17th SIAM International Conference on Data Mining & Analytics (SDM 2017). [Submitted, Under Review] abstract-pdf	
PATENTS	<i>Deependra Singh</i> , Vinay Deolalikar: “Automating Relevance Banding in eCommerce Search using Click Model”. [US Patent Filed]	
SELECTED PROJECTS	UCSC – Silicon Valley Extension <ul style="list-style-type: none"><i>Locating Protein Coding Regions in Human DNA</i> Used decision tree algorithm to produce classifiers based on several coding measures to distinguish between protein coding and noncoding regions on Human DNA sequences ranging from 54 to 162 base pairs in length.	Santa Clara, CA Fall 2016

	Groupon	Palo Alto, CA
	<ul style="list-style-type: none"> • <i>Automating Relevance Banding in eCommerce Search</i> Automated the process of relevance banding using statistical and information theoretic concepts over query-category probability distribution provided by Click Model, and deployed to production. 	Mar – Nov 2016
	Groupon	Chennai, India
	<ul style="list-style-type: none"> • <i>User Email Engagement Prediction</i> Worked on developing models for UK market to predict future user engagement with Groupon through emails based on user features and historical activities. 	Jun – Sep 2015
	<ul style="list-style-type: none"> • <i>Demand Forecasting</i> Worked on developing a machine learning framework to forecast demand in assorted categories and price ranges for each local Groupon market in UK, Germany, France, and Italy. 	Jul – Nov 2014
	Indian Institute of Technology Delhi	New Delhi, India
	<ul style="list-style-type: none"> • <i>Enhancements in NVDA Screen Reader (B.Tech. Thesis)</i> Added support for complete set of charts in Microsoft Excel and enhanced support for web browsers in the python-based open source screen reader NonVisual Desktop Access (NVDA), incorporating feedback from visually impaired community. 	Jul 2013 – May 2014
	<ul style="list-style-type: none"> • <i>Pintos Operating System</i> Implemented system calls infrastructure, extended the virtual memory implementation and file system support on the bare-bones operating system for x86, Pintos. 	Spring 2013
	<ul style="list-style-type: none"> • <i>Networked Multiplayer Carom Game</i> Designed and Developed a multiplayer networked carom game in C++ using OpenGL for graphics, and TCP for network calls. 	Fall 2011
PROGRAMMING	Java, Python, Hive, Hadoop, SQL, MATLAB, R, Shell, C++, C, Standard ML, MIPS Assembly, VHDL	
AWARDS & ACHIEVEMENTS	<ul style="list-style-type: none"> • Awarded Merit-cum-Means scholarship by Ministry of Human Resources, Govt. of India. [2010 – 2014] • Youngest of the graduating class of 2014 having completed bachelor's degree at the age of 19. [2014] 	
TEACHING EXPERIENCE (VOLUNTEER)	Make A Difference	Chennai, India
	English Teacher	Jul 2014 – Apr 2015
	Taught introductory English to a class of 30 freshmen living in a shelter home assisting them with the change in medium of instruction from Tamil to English.	
	Make A Difference	New Delhi, India
	Mathematics Teacher	Jan – Apr 2014
	Taught Mathematics to a group of senior secondary students living in an orphanage.	