**DMITRI V. KUZNETSOV, Ph.D.**

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**VP / DIRECTOR – ADVANCED ANALYTICS**

Primary leader in design, development and application of analytics, data science, artificial intelligence (AI) and social physics as tools for understanding and improving business processes and corresponding human behavior based on analysis of big data. Apply data analysis for joint business and human intelligence to understand, optimize and build associations between businesses and human activities (online and offline, geolocation, phone calls, live boat chats, purchases, etc). Uncover mathematical patterns characteristic of how social interactions spread and converge. Developed and applied analytics and data science for both Fortune 500 and smaller, aggressive competitor companies. Saved multi-millions of dollars for clients in banking and finance, insurance, retail, food service, healthcare, aviation, energy, manufacturing, entertainment, security and telecommunications.

As hands-on subject matter expert and thought leader in creation and application of cutting-edge techniques, resolved some of the most challenging business problems related to determining and potentially influencing social attitudes and behaviors to improve opportunities for growth, innovation and competitive advantage in a digitized world with potentially zettabytes of data stored both on the cloud and on local servers with tools like R, SAS, Python, Spark, Hadoop, SQL and noSQL, VBA, Java, Matlab, AnyLogic and Tableau.

Presented and taught emerging topics in business analytics to better understand and use complex mass social processes for marketing, better customer experience and revenue growth. Wrote over 70 research publications. Skilled in advancement and application of machine learning, artificial intelligence and simulation, including deep learning neural networks and image recognition.

Founder and principal developer of an innovative social physics concept application known as mediaphysics (development work highlighted in BusinessWeek and Mediapost), a scientific sub-branch that is key to transforming dry facts and figures into strategic insights that deliver intelligence.

Skilled in enabling organizations to make fact-based decisions across their value chain through harnessed information to increase overall performance, differentiation and profitable growth, while mitigating risks.

Citizen of the US fully qualified to work in this country.

**Career History & Key Achievements**

**Chief Science Officer (CSO) / Vice President, Genpact,** 2015 to 2016. Provided advanced business analytics enabling financial services, consumer goods, life sciences, manufacturing, media and a broad spectrum of high technology client companies to align their processes with measurable business outcomes. Led analytics and data science encompassing machine learning, artificial intelligence, real-life business simulation modeling, sociophysics and text mining. Provided analytics leadership support for offices in North America, Europe and Asia.

Led analytics apps development. Taught analysts and data scientists through customized lectures through Genpact University. Kept analytics-related employees current in cutting-edge methods in statistics, machine learning, sociophysics and simulations. Developed mentorship program, white papers and blogs promoting Genpact’s achievements in advanced analytics to resolve data science problems and build support for business development, attract and retain clients, and increase revenue. Headed team of 20 for this global leader in designing, transforming and running complex business process operations.

* **Increased number of successful client projects.** Genpact needed its analytics thought and innovation leaders to work with clients through a series of stages to drive the company’s business development. Regularly participated in workshops with clients to understand their needs and problems, and developed recommendations on appropriate methods to solve them. Prepared statements of work (SOW) and launched pilot and phased programs.
* **Strengthened ability in social listening.** Analyzed unusual product-related behavior, early warning for complaints and brand value at risk. Better sentiments scoring and opinion mining was needed to capture complexity, attitudes and emotional responses on social networks, blogs and forums. Combined machine learning and lexicon-based approach with advanced industry-and-context relevant dictionaries. Significantly increased accuracy of automated scoring vs. manual base by up to 88%. Enabled Genpact to attract new clients through enhanced ability to improve social listening methods.
* **Enabled clients to optimize their processes and reorganize their business lines using risk-free virtual simulations.** Highly complex business problems increasingly required real-life simulation as the only accurate method for supporting business decisions. Organized and led team of Genpact experts in business-process simulations. Applied risk-free, real-life analytics in virtual scenarios

**Director in Analytics Advisory, PwC (PricewaterhouseCoopers),** 2013 to 2015. Led analytics development as subject matter expert at PwC’s National Analytics Hub for Advisory Services, providing support in enhancing business development and project delivery to analysts and top clients globally. Designed and successfully applied numerous advanced analytics methodologies and tools.

**D**eveloped social listening approach to analyze brand value dynamics and potential risks. Introduced innovative analytics to social network sentiments scoring, incorporating elements of mediaphysics methodology valuable in uncovering unsafe trends and near-critical phenomena. Led team collaboration that contributed to the increase of the analytics element in advisory services. Headed team of 20.

* **Powered business development and analytics delivery.** Led analytics developments for analytics-advisory applications and Software-as-a-Service (SaaS), including AI-as-a-Service. Enhanced agile sprints and waterfall methods to facilitate outcomes.
* **Significantly improved customer satisfaction levels.** **C**all-center analytics needed to improve customer services. Created an automated problem-analytics system based on voice-to-text recognition, natural language processing (NLP), and theme and problem extraction. Bolstered customer satisfaction as demonstrated through satisfaction surveys, stimulating customer acquisition and retention.
* **Strengthened client marketing and predictive performance.** Incorporated cutting-edge analytics to optimize marketing across different channels, helping to greatly increase sales for a major retail client. Made significant improvements in aviation technical-failure predictions, based on both structured (sensors) and unstructured (text logs) data. Utilized advanced data science methods with machine learning to achieve predictive target. Outperformed competitive analogs in terms of predicted vs. actual failures.

**Vice President of Analytics, Intelli-Global / Intellidyn Corp,** 2006 to 2013. Managed analytics department. Developed and successfully applied advanced marketing models, methodologies and tools. Led team of 12.

* **Optimized direct marketing strategies.** Developed semi-automatic profiling and nested models to predict and target right prospects with highest response, and boost convergence and approval rates for clients in the lending, insurance, investment, credit, B2B, travel, security systems, healthcare, solar energy and other sectors. Saved millions of dollars for clients through higher performance rates than obtainable from traditional direct marketing.

**Senior Brand Analyst, MPG (Media Planning Group) - part of Havas Media,** 2004 to 2006. Developed advanced predictive modeling, optimization and consulting methodologies for media planning. Developed a concept for application of sociophysics to analysis of mass media processes.

* **Saved millions of dollars for clients** through development of an innovative methodology delivering high performance accuracy. Traditional methods for analyzing media performance in marketing were insufficiently accurate. Served as author and principal developer of an application of social physics known as mediaphysics for analysis and planning of mass social processes, including word-of-mouth and other social phenomena.

**Senior Statistical Consultant, SIGMA Marketing Group,** 2003 to 2004. Served as primary analytics consulting developer of advanced predictive models for marketing decisions. Developed new business opportunities. Wrote research papers and mentored statisticians. Developed advanced analytics and systems for customer sales cycles supporting customer retention for Kodak, Avaya, AMEX and Xerox. Saved millions of dollars for clients through predictive systems.

* **Optimized marketing and support relations with B2B clients.** To improve relations and sales cycle with business customers, SIGMA needed to estimate client needs. Adopted advanced statistical methods.

**Senior Scientific Developer, KSS Group,** 2002 to 2003. Primary developer of advanced pricing models for retail (PriceStrat system used by Rite Aid) and gasoline pricing (PriceNet system employed by BP, Sunoco, Tosco and other companies). Incorporated advanced techniques such as stochastic resonance. The gasoline-pricing model was accepted as the best in competition among several consulting companies.

**Quantitative Business Analyst, Giant Eagle, Inc,** 2001. Provided analytics consulting for senior management for this major regional grocer. Introduced predictive modeling and research on risks, marketing and price optimization for revenue and profit management.

* **Established scientific pricing.** Supermarket chain required pricing recommendation system to meet competitive challenges while maintaining profitability. Developed advanced quantitative predictive models for revenue and profit management, and price optimization. Applied what-if analysis to pricing, encompassing promotional, dynamic, seasonal, clearance, traffic builder, and competitive pricing elements.

**Education**

Ph.D. and M.S. in Mathematics and Physics, Moscow State University.

**Contracts with Universities**

University of Pittsburgh (Pittsburgh, PA, USA), Senior Researcher, 1999 – 2000

University of Waterloo (Waterloo, ON, Canada), Project Co-Director, 1997–1999

Pohang University of Science and Technology (S. Korea), Visiting Scientist, 1995 – 1996

**Research Project Analytics Lead**

Research Project Manager in projects supported by industrial companies: Dow Corning Corporation and Dow Chemical Company (1999 – 2000)

Co-Director in projects with University of Waterloo (Canada) supported by NATO: 1997 – 1999

Leading Researcher in a project with MIT supported by the US Civilian Research Development Foundation (1997 – 1999)

Principal Researcher in projects supported by the Foundation for Basic Research: 1994 - 1999

Principal Researcher in projects supported by the International Science Foundation: 1993-1995