

Gaurav Aggarwal

MODEL RISK MANAGEMENT · VALUATION AND MODELING · RISK ANALYTICS

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Work Experience

Deloitte & Touche AERS India Pvt. Ltd.

Sep 2014 - Present

CONSULTANT-II

Hyderabad, India

- Performed full-scale validation of forecasting models for Pre-Provisions Net Revenue (PPNR) and Balance Sheet (BSM) Origination Volumes for a leading US Bank. The scope of work included assessing the theoretical soundness, economic rationale, statistical testing and related inferences across the models.
- Conducted assessment of the Bank's Model Development and Validation Framework for alignment with best industry practices and Supervisory Guidance on Model Risk Management (CCAR and SR 11/7).
- Conducted independent Annual Model Reviews for Credit Scorecard Models, assessing the model inputs and outputs, as an on-going risk governance exercise for a leading US Bank.
- Developed \LaTeX classes and packages for the documentation of modeling methodologies and review processes per the latest guidelines for the Quality Check and Review team of the Bank.
- Performed valuations of fixed income instruments; derivatives on interest rates, foreign exchange, equity and credit; structured products like mortgage backed securities and loan instruments for Securities Pricing Center at Deloitte.
- Analyzed a portfolio allocation model, for an advisory engagement, and devised mitigation methodology for the observed errors in the estimation.
- Determined Value at Risk (VaR) for clients based on their portfolio positions and historic market movements as a part of Audit Support.
- Developed Python based tools to conduct testing for multiple Hedge Effectiveness testing projects.

Education

Indian Institute of Science Education and Research Mohali (IISER Mohali)

Aug 2009 - May 2014

B.S.- M.S. (DUAL DEGREE) IN MATHEMATICS

Chandigarh, India

- The dissertation "Diffusion Processes: analysis and their applications" outlines the definition of stochastic differential equations and Itô's Lemma. It included an extensive study of the principles of probability theory with analysis of some historically relevant examples of SDE's.
- Attended the First Instructional School for Mathematical and Computational Biology organised by NNMCB. This included an elaborate study of modules including Stochastic Processes, Time Series Analysis, ODE's and PDE's along with their applications in Biological modeling.
- Recipient of Innovation in Science Pursuit for Inspired Research (INSPIRE) scholarship for higher education (SHE) provided by DST, India.

Skills

Finance	Fixed Income Markets, Derivatives, Market and Credit Risk Analysis, Predictive Modeling
Mathematics	Time Series Analysis, Statistics, Probability Theory, Stochastic Calculus, Data Science, ODE's and PDE's, Simulations
Programming	Python, SAS, R, PERL, MATLAB, C, VBA
Tools	Bloomberg, IntexCalc, SuperDerivatives, Capital IQ
Documentation	\LaTeX , MS Word, MS Excel, MS Office
Languages	English, Hindi, Punjabi

Awards & Achievements

Dec 2015	Client Appreciation Award , Awarded for the work on the advisory engagement.	MRM, Deloitte
Sep 2015	Promotion , from Consultant-I to Consultant-II.	V&M, Deloitte
2014	Fellow , Innovation in Science Pursuit for Inspired Research (INSPIRE), Graduate Fellowship.	DST, India
2014	Student Member , Institute of Actuaries of India (IAI).	IAI, India
2009	Scholar , Innovation in Science Pursuit for Inspired Research (INSPIRE), SHE.	DST, India
2007	Scholar , National Talent Search Scheme (NTSS).	NCERT, India

Other Experience & Interests

Cultural Secretary- Elected member of the Student's Representative Council at IISER Mohali for 2 years.

Festival Coordinator- Organized INSOMNIA, the annual cultural festival at IISER Mohali in 2013 and 2014.

Dance- Conceptualized, choreographed and performed in over 15 group dance performances.

Arts- Designed various art pieces, these include a *Tangrams* shelf displayed at Humanities Department at IISER Mohali.

Sports- Member of the award winning teams for Football and Basketball at IISER Mohali.