

**Review Form 1.7**

Journal Name:	<b>Current Journal of Applied Science and Technology</b>
Manuscript Number:	<b>Ms_CJAST_119700</b>
Title of the Manuscript:	<b>A scientific computing analysis of financial Black-Scholes and Monte Carlo differential equation: An American option</b>
Type of the Article	

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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Compulsory</b> REVISION comments</p> <p>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</p> <p>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</p> <p>3. <b>Is the abstract of the article comprehensive?</b></p> <p>4. <b>Are subsections and structure of the manuscript appropriate?</b></p> <p>5. <b>Do you think the manuscript is scientifically correct?</b></p> <p>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></p> <p><b><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></b></p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Use the below references in your manuscript. Insert after 2<sup>nd</sup> reference</p> <p>1. Dar, A. A., Khan, M. S., Azad, I., Jayaraman, G., &amp; Farooqi, A. R. (2024). Exploring the impact of input variables on option value: A study using experimental design and analysis techniques. <i>Discover Applied Sciences</i>, 6(1), 28.</p> <p>2. Dar, A. A., Anuradha, N., &amp; Nihel, Z. (2021). Comparison of European Option Pricing Models at Multiple Periods. In <i>Handbook of Research on Engineering, Business, and Healthcare Applications of Data Science and Analytics</i> (pp. 149-166). IGI Global.</p> <p>3. Dar, A. A., &amp; Anuradha, N. (2020). Use of Taguchi method for optimisation of process parameters of option pricing model. <i>International Journal of Services, Economics and Management</i>, 11(1), 1-20.</p> <p>Dar, A. A., &amp; Anuradha, N. (2020). Studies on European call option of binomial option pricing model using Taguchi's L27 orthogonal array. <i>International Journal of Intelligent Enterprise</i>, 7(1-3), 234-249.</p>	
<p><b>Minor</b> REVISION comments</p> <p>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></p>		
<p><b>Optional/General</b> comments</p>	<p>Your study provides a thorough and insightful analysis of financial models, specifically the Black-Scholes and Monte Carlo differential equations, for evaluating American options. The exploration of the unique challenges posed by early exercise features and the comparative efficacy of the two models is well-articulated. Highlighting the limitations of the Black-Scholes model and the advantages of Monte Carlo simulations in handling volatility and early exercise potential adds depth to your analysis. Incorporating finite difference methods and variance reduction techniques demonstrates a robust computational approach. To enhance clarity, consider addressing the typographical errors and ensuring consistent terminology throughout the text. Overall, your study underscores the critical role of advanced computational methods in financial engineering.</p>	

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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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