

## Jupyter Notebook Rubric (10%):

	<b>Advanced 4</b> Achieved	<b>Proficient 3</b> Mostly achieved but there are some minor omissions or flaws	<b>Approaching proficiency 2</b> Somewhat achieved but there are some major omissions or flaws	<b>Beginning 1</b> Little or no evidence
<b>Syntax and Logic (code focussed)</b> <ul style="list-style-type: none"> <li>Code supplied in required format of Jupyter Notebook with Python 3.X</li> <li>Demonstrates an ability to understand, interpret and follow the rules of the programming language.</li> <li>Achieves a proper compile.</li> <li>Uses correct program logic.</li> <li>Demonstrates an ability to specify appropriate conditions, control flow, and data structures.</li> </ul>				
<b>Correctness and Completeness (analysis focussed)</b> <ul style="list-style-type: none"> <li>Correctly codes formulae and algorithms that reliably produce correct answers or appropriate results for all inputs tested.</li> <li>All code used for report included.</li> <li>Rigorous case analysis applied (if relevant).</li> </ul>				
<b>Clarity and Modularity</b> <ul style="list-style-type: none"> <li>The purpose of the code is formatted and documented for readability.</li> <li>Major functions, variables, or non-trivial algorithms are all documented.</li> <li>Indentation and other formatting is used as appropriate.</li> <li>The problem is decomposed into coherent and reusable functions, files, classes, or objects as appropriate.</li> <li>No unnecessary repetition</li> </ul>				
<b>Use of Jupyter Notebook as a communication tool</b> <ul style="list-style-type: none"> <li>Appropriately embeds and blends code, equations, text, visualisations and other multimedia</li> <li>Interactive aspects are easy to follow and use</li> </ul>				

<ul style="list-style-type: none"><li>• Supplements code and data exploration with analysis, hypotheses and conjecture to create a computational narrative.</li></ul>				
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## Project (30%):

	<b>Advanced (publish as is or with revision optional) 4</b> Achieved	<b>Proficient (minor revisions) 3</b> Mostly achieved but there are some minor omissions or flaws	<b>Approaching proficiency (major revisions) 2</b> Somewhat achieved but there are some major omissions or flaws	<b>Beginning (reject) 1</b> Little or no evidence
<b>Background</b> <ul style="list-style-type: none"> <li>Relevant studies are summarised.</li> <li>Work is placed in context of existing literature.</li> </ul>				
<b>Description of model</b> <ul style="list-style-type: none"> <li>Demonstration of clear and solid computational modelling thinking.</li> <li>Assumptions are stated and reasoning is given for relevant design and parameter choices.</li> <li>Model is presented logically and without ambiguity.</li> <li>Indications of original, critical thought.</li> </ul>				
<b>Modelling process</b> <ul style="list-style-type: none"> <li>Demonstration of clear and solid computational modelling thinking.</li> <li>Methods presented clearly.</li> <li>The model behaviour is explored through appropriate and comprehensive experimentation and case study.</li> <li>Indications of original, critical thought.</li> </ul>				
<b>Results</b> <ul style="list-style-type: none"> <li>Data and results are presented in a clear, concise, and accurate manner.</li> <li>All figures and tables are simple, well organised, and carefully chosen.</li> <li>Results are reproducible.</li> <li>Results are aligned with the model purpose.</li> </ul>				
<b>Conclusions and interpretation of results</b> <ul style="list-style-type: none"> <li>Conclusions are justified and based on the data.</li> <li>Flaws and potential are identified.</li> </ul>				

<ul style="list-style-type: none"> <li>• Clear connections are made between conclusions and scientific concepts learnt in class.</li> </ul>				
<b>Readability and clarity of communication</b> <ul style="list-style-type: none"> <li>• General cohesion of report with appropriate layout and formatting.</li> <li>• Language should be simple and appropriately technical with jargon avoided and technical terms defined.</li> <li>• Sentence structure/grammar etc should be correct.</li> </ul>				
<b>Citation and bibliography</b> <ul style="list-style-type: none"> <li>• Relevant works identified and credited.</li> <li>• Citation should be that of peer-reviewed articles where applicable with minimal internet citing.</li> <li>• Appropriate and consistent formatting.</li> </ul>				