

# Roy (Joe) Joseph Clayton

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• roy.clayton.18@ucl.ac.uk

EDUCATION	<b>University College London (UCL)</b> MSc: <i>Physics</i> Distinction (Expected)	London, UK 2020 - 2021
	<b>Wesleyan University</b> BA: <i>Mathematics &amp; Physics</i> Student-Athlete, Dean's List: 2019, 2020	Middletown, CT, USA 2016 - 2020
WORK EXPERIENCE	<b>Virtu Financial</b> <i>Intern</i> <ul style="list-style-type: none"><li>• One of six interns working within Execution Services</li><li>• Projects relating to analysis of dark liquidity and ETF volumes statistics</li><li>• Strong emphasis on SQL and Python/Pandas</li></ul>	London, UK Summer 2021
	<b>University College London (UCL)</b> <i>Graduate Research Assistant - Rosta Research Group</i> <ul style="list-style-type: none"><li>• Research interests include dynamical coarse-graining techniques</li><li>• Findings were featured in a submitted publication [1]</li></ul>	London, UK 2020 - 2021
	<b>Wesleyan University</b> <i>Tutor - Dean's Peer Tutoring Program</i> <ul style="list-style-type: none"><li>• Modules: Multivariable Calculus, Quantum Mechanics I, Calculus II, Differential Equations, Linear Algebra</li><li>• Implemented individualized weekly two-hour to cover coursework problems</li></ul>	Middletown, CT, USA 2018 - 2020
	<i>Undergraduate Research Assistant - Ellis Quantum Fluids Lab</i> <ul style="list-style-type: none"><li>• Researching the effects of torque applied by an overhanging piezoelectric system</li></ul>	2018 - 2019
RELEVANT PROJECTS	<b>MSc Physics Research Thesis</b> <i>Markov State Models: Variational Coarse-Graining and the Kemeny Constant</i> <ul style="list-style-type: none"><li>• Investigation of a dynamic coarse-graining of Markovian kinetic systems</li><li>• Proposal of a novel expression for the optimal clustering of an arbitrary system</li><li>• Numerical validation using MATLAB</li></ul>	2021
	<b>Statistical Analysis</b> <i>The Impact of "Food on the Move" on Consumption of Fruits and Vegetables by Rhode Islanders</i> <ul style="list-style-type: none"><li>• Statistical analysis on behalf of the Rhode Island Public Health Institute</li></ul>	2020
	<b>Computational Physics</b> <i>Two Dimensional Atomic Interaction Modelling</i> <ul style="list-style-type: none"><li>• Simulation of particle interactions using Monte Carlo techniques</li></ul>	2019
PUBLICATIONS	[1] V. Koskin; A. Kells; J. Clayton; A. Annibale; E. Rosta;. Variational kinetic clustering of complex networks. <i>J. Chem. Phys.</i> , 2021	
LANGUAGES	English (native), French (conversational)	
PROGRAMMING	Python, C/C++, L <sup>A</sup> T <sub>E</sub> X, MATLAB, SQL	
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