

Dinesh Kalamegam

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Education

University College London

London, UK

MENG MATHEMATICAL COMPUTATION - FIRST CLASS HONOURS

2016 - 2020

- **Thesis:** SOTA Robot to Collect Feedback From Children — Oct 2019 - May 2020
- **Relevant Modules:** Data Structures and Algorithms, Object Oriented Programming, Concurrency, Databases, Compilers, Computer Systems
- **Lead Departmental Representative:** Undergraduate Computer Science — Oct 2019 - Aug 2020
 - Made changes to the Mathematical Computation program for more flexible options and added more mathematical material into the degree
 - Led fellow course reps in setting committee meeting agendas as well as leading discussions on how to handle feedback on the Unitu online feedback platform
 - Provided reassurance and information between staff and students during the COVID-19 Pandemic

Experience

BMLL Technologies Ltd

London, UK

INTERN

Jun 2019 - Sep 2019

- Developed methods to implement the graphs of the financial research paper “The Benefit of European Periodic Auctions Beyond The MIFID II Double Volume Caps” into a Jupyter Notebook using the BMLL Platform emulating a BMLL client
- Successfully reproduced 80% of the graphs in the paper which demonstrated that the BMLL platform was a viable platform for the needs of Kepler Cheuvreux which assisted in improving the relation between the two companies
- Accessed limit order book and trade data of STOXX 600 components with BMLL’s Python API and performed analytics using Pandas
- Utilised PySpark to distribute computations on more than 500,000 Securities across 3000 cores with Amazon Web Services (AWS)
- Visualised the analytical trends of the paper into interactive graphs with the Plotly Python graphing library

University College London (UCL) & UNICEF

London, UK

SOFTWARE DEVELOPER

Jan 2017 - Apr 2017

- Lead researcher in a team of 3 where we developed an online database management system in collaboration with UNICEF.
- Designed administrator dashboard using HTML, CSS, and Material Design Lite (MDL), thereby allowing admins quick-and-easy access to member information and administrative tools.

Skills

Languages Python, Java, C, SQL, HTML, CSS, JS
Technologies MongoDB, Numpy, Git, LaTeX, React JS

Projects

SOTA Robot to Collect Feedback from Children - (Python | MongoDB | Robotics)

London, UK

GREAT ORMOND STREET HOSPITAL (GOSH) & NTT DATA

Oct 2019 - May 2020

- Proof Of Concept system for NTT Data and Great Ormond Street Hospital to use a tabletop social robot called “SOTA” to deliver feedback questionnaires
- Questionnaires developed using interchangeable JSON files. Gives users ability to set both closed questions with custom expected responses and open questions.
- Robot and child are able to interact with each other through voice, robot reacts to positive and negative responses programmed in Python
- Used cloud MongoDB database to store responses and created visualisations of the data gathered.

Module Mark Visualiser (CSS | ReactJS)

PERSONAL PROJECT

- Available at: <https://dinesh-kalamegam.github.io/ucl-cs-foi-react/>
- Currently a work in progress - Created website with React JS for third and fourth year computer science students to compare the mark percentiles of modules
- Used the react-chart-js-2 library to create the bar charts and line charts using data in JSON format

Unity 2D Endless Runner – (Unity Engine | C#)

COURSEWORK

- Sole Researcher, Developer and Tester of a 2D endless runner game for A-Level Computing Project under a spiral model system development life cycle.