

SETH FLAXMAN

**Subject:** UROP Opportunities

Dear Prof. Seth Flaxman,

We hope this email finds you well and healthy.

Our names are Jonathan Rubin and Selena Linden, we are Year 3 mathematics students at Imperial, and we are seeking research experience in machine learning and data science.

Do you offer any UROP research opportunities this summer and/or research assistantship positions for this coming spring term?

We are both on the MSci programme, hence we are also interested in converting research experience done this year into a final dissertation project for next academic year 2022-2023.

We have both achieved **First-Class Honours** in Year 1 and Year 2 (transcript available upon request). We have also worked on several end-of-year research projects and UROPs (see attached document for more details).

Many thanks,

Jonathan Rubin and Selena Linden

## SEPARATE DOCUMENT

### End-of-Year Research Projects and UROPs

1. Dynamics of SIRS based disease models - Jonathan Rubin, Year 1 individual research project, Grade **80.00%**
2. Regression Analysis on Covid-19 Data: Impact of Early Non-Pharmaceutical Measures on 2.5-months Incidence of COVID-19 - Selena Linden, Year 1 individual research project, Grade: **72.00%**
3. An Introduction to Time Series with IBM Data Analysis - Jonathan Rubin, Selena Linden, et al., Year 2 group research project, Supervisor: Henrique Helfer Hoeltgebaum, Grade: **84.42 %**
4. Exploring the Interplay Between Phase Separation and Collective Motion in Active Matter – Jonathan Rubin, Year 2 **funded** UROP, Supervisor: Thibault Bertrand
5. Literature Review of PLS and O2PLS Algorithm – Selena Linden, Year 2 interrupted UROP, Supervisor: Marina Evangelou

(Reports available upon request)

### Relevant Year 2 & 3 Modules:

Introduction to **Machine Learning** (auditing from DOCS), Methods for **Data Science**, Principles of Programming, Applied Probability, Computational Linear Algebra, Time Series Analysis, Stochastic Simulation, **Statistical Modelling 1&2**.

