

# Zhenghong Lieu (lieuzhenghong@gmail.com)

## Education

### Oct 2017 – Jun 2020 University of Oxford

BA in Philosophy, Politics and Economics (PPE)

- 1st Class Honours (5th of 259 in graduating cohort)
- Microeconomics, Macroeconomics, Quantitative Economics, Game Theory, Behavioural Economics, Theory of Politics, Political Sociology, Thesis in Politics

### Jun 2017 – present Massive Open Online Courses (MOOCs) completed

Computer Science

- Algorithms and Data Structures (Stanford)
- Databases (Stanford)
- Machine Learning (Stanford)
- From NAND to Tetris I & II (computer architecture) (IDC Herzilya)
- Competitive Programmer's Core Skills (SPSU)

Data Science

- Functional Programming Principles in Scala (EPFL)
- Parallel Programming in Scala (EPFL)
- Big Data Analysis in Scala and Spark (EPFL)

Mathematics

- Linear Algebra (Imperial College London)
- Multivariate Calculus (Imperial College London)

## Experience

### Jun 2019 – Sep 2019 Data Scientist (Intern)

*Inzura AI*

Increased monthly active users by > 20% by building a Bayesian SMS sender in Python and SQL, meeting a KPI which secured an important client contract

Built deep learning model with Keras that reduces trip processing time from 7s to 0.05s, which made possible a new revenue vertical for the company

Deployed distributed Apache Spark infrastructure and performed Big Data analysis with Scala on ~85 million data points used to assign users more accurate risk ratings

### **Jun 2018 – Aug 2019 Blockchain Developer (Intern)**

*Infocomm Media Development Authority of Singapore (IMDA)*

Wrote a research paper on blockchain interop protocols and presented it to senior management

Created a fully-automated blockchain demonstration of supply chain management:

- Real-time blockchain visualisation using JavaScript and Canvas
- IoT sensor integration to update asset location data on Hyperledger blockchain
- QR-code based asset tracking with Node.js

### **Jun 2017 – Aug 2017 Software Engineer**

*Imcomp International*

Greatly increased firm efficiency (75% less time taken to generate reports, 300 engineer hours saved per month) by developing bespoke building inspection software (Electron, Vue.js, JavaScript)

### **Jan 2017 – May 2017 Venture Capital Analyst (Intern)**

*iGlobe Partners*

Co-wrote 2 papers recommending investment; senior management accepted both recommendations and made Stage B investments

Developed more powerful version of Microsoft Mail Merge in Python that automates away 90% of human errors and saves 50% time when sending mass mailers

### **May 2016 – Sep 2017 Python Programming Tutor (Volunteer)**

*Ulu Pandan Stars*

Taught a team of underprivileged children Python and led them to win 3rd (amongst ~100 participating teams) in national hackathon CodeXtreme

### **Feb 2015 – Dec 2016 Soldier (Conscript)**

*Singapore Armed Forces (SAF), HQ Army Medical Service*

Developed the Army's first item tracker and SMS reminder service with React and Node.js:

- Won second prize in the Army Annual Innovation Competition
- Won Best Soldier of the Month out of ~3000 soldiers

## **Working Papers**

**2020** "Is there a trade-off between compactness and district homogeneity?"

**2020** “How does communication increase coordination in the Stag Hunt game?”

**2019** “Accounting for Travel Times in Estimating Political Dislocation”

*with Nicholas Eubank and Jonathan Rodden*

## **Honors and Fellowships**

**Oct 2019** Postmaster

*Major college scholarship awarded for sustained academic excellence*

**Aug 2019** Raff Prize

*Awarded for best second-year Economics performance in my college*

**Oct 2018** Exhibitioner

*Minor college scholarship awarded for good performance in the first year*

**Aug 2018** Sam McNaughton Prize

*Awarded for top score in Philosophy in the PPE first-year exams*

**June 2018** Quantitative Political Essay Prize

*Awarded to the best quantitative essay of my Oxford politics cohort (~300 students)*

**Dec 2017 – Jun 2020** Fowler Prizes

*Awarded for First-class performance in termly exams, awarded 6/6 terms*

**Sep 2017** National Infocomm Scholarship

*Full-ride undergraduate scholarship awarded to promising Singaporean students by the Infocomm Media and Development Authority (IMDA), a Singaporean statutory board. Awarded on the basis of academic excellence, demonstrated interest in tech, and a will to serve the nation.*