Akmal Shahid Rafiq

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EDUCATION

Kings' College London
MSc Complex Systems Modelling- from Biomedical & Natural to Economic & Social Sciences

2018 – 2020
Merit

- Dissertation: Optimal Resource Allocation and Investment Strategies (Distinction)
- Coursework Projects: Effects of Latitude on Wildfires in different US Ecosystems, Path Integral Methods in Finance, Contagion in Financial Networks, Optimisation Methods in Physics

London School of Economics and Political Sciences
BSc Mathematics and Economics

2015 – 2018
Lower Second Class Honours

Adams Grammar School

2008 – 2015

- A Levels: A*A*Aaa in Mathematics, Further Mathematics, Chemistry, Physics & Additional Further Mathematics
- GCSE/IGCSE: 6A*, 3A, 2B
- Extracurricular Activities: Awarded School colours in Hockey, Senior Arts, Music and Cross Country.

RESEARCH AND WORK EXPERIENCE

Junior Data Scientist
Annalect Marketing Science, OMD Manning Gottlieb

September 2019 – Present

- Worked on econometrics projects measuring the effect of media in healthcare, cosmetics and automotive industries
- Responsible for processing and validating data, constructing and evaluating models and presenting to clients.
- Build optimisation tools and real time data visualisation dashboards for clients using R Shiny and Datorama.
- Conduct my work across a consistent workflow of Excel, Python, EViews and R but have been reworking it so we can do all our work on R.

Summer Research Assistant
LSE

July 2018 – September 2018

- Assisted with a project to collate a comprehensive literature review on the causes and effects of 'Son Preference' around the world. I primarily focused on research based in Indian subcontinent.
- Investigated with a PhD student the flaws with methods of GDP measurement and how to obtain accurate estimates of the Shadow Economy using cryptocurrency transactions.

Student Researcher
LSE GROUPS

May 2017 – June 2017

- Took part in the LSE GROUPS scheme- a programme which brought together undergraduate students of a wide range of disciplines to work together on a research project.
- Collaborated with a team of student researchers to produce a paper about public perceptions of the UK's Terror Threat Level System.
- Evaluated data collected from surveys and the internet via a mixture of qualitative and quantitative methods.
- Presented our results to professors and lecturers at the university.

Junior Investments Intern
3VI Limited

June 2016 – July 2016

- Analysed accounts of various companies and judged what would be profitable investments for the a venture capital firm for six weeks.
- Oversaw the workings of various industries, from oil production & children entertainment to sports betting & property investment.

ONGOING PROJECTS

Optimal Resource Allocation | *MATLAB, Mathematica, R*

June 2019 – Present

- Advancing resource allocation problems solved in my Masters Dissertation into investment strategies to be applied in urban planning.

Forsa | *Python, Javascript, React, MySQL, Tensorflow, AWS*

May 2020 – Present

- Developing a full-stack web application to address the problems with skill shortages in the West Midlands, linking job seekers with suitable education providers. Currently data engineering the platform for wide scale use.

Teaching Experience

Graduate Teaching Assistant September 2019 – present
King's College London
- Assisting with the teaching of for the 2020/21 Academic Year:
    * 4CCM111A Calculus I *(Winter Semester- Undergraduate)*
    * 4CCM113A Linear Algebra and Geometry I *(Winter Semester- Undergraduate)*
    * 7CCMCS05 Mathematical Biology *(Spring Semester- Postgraduate)*
    * 7CCMCS06 Elements of Statistical Learning *(Winter Semester- Postgraduate)*
- Responsibilities include leading online tutorials and practicals, writing up solutions and providing feedback on problem sets.

Course Facilitator September 2017 – January 2018
LSE LIFE
- Planned and directed a six week course with five other students to teach key quantitative skills to students studying qualitative subjects. This included teaching them basic statistics, understanding regression and how to use STATA
- Obtained positive feedback from university administrators and used it to teach future years

Teaching Assistant January 2012 – April 2015
TLC College
- Taught Mathematics and English, as preparation for competitive entrance exams for secondary schools at a centre for disadvantaged children in Wolverhampton.

Extra Curricular Activities

Soup Kitchen Volunteer, *Children of Adam* May 2019 – present
- Distributed wasted food from supermarkets and provided fresh warm meals for homeless people in London

Field Hockey Player, *KCLMHC, LSEHC, AGSHT & WTHC* September 2010 – present
- Played for my local club and school teams, went on sports tour to Sri Lanka & captained my University's 3rd Team.

Event Organiser, *TEDxLSE & TEDxKCL* September 2015 – February 2019
- Managed the organising committee for three years where I worked as Marketing Director, Secretary and eventually elected President of the TEDxLSE organisation. I organised an Annual Conference for 500 attendees every year, trained speakers and managed internal and external communications

Head of Outreach, *Wolverhampton Muslim Outreach* June 2017 – July 2018
- Organised a weekly soup kitchen to homeless people as part of an initiative to help homeless people in Wolverhampton. Responsible for social media activities of the group as well outreach to other charities.

Welcome Week Helper, *LSESU* September 2016
- Volunteered for the Student Union during welcome week for new students and assisted with activities around the university and to ultimately help them settle into the university and their new surroundings.

Flight Sergeant, *RAF Section, Adams' Grammar School CCF* September 2009 – June 2015
- Ranked as Flight Sergeant in the Cadet Force of 75 cadets and responsible for arranging lessons on weapon training and aircraft for younger cadets and lead night exercises. Awarded a Gliding Scholarship and achieved my Duke of Edinburgh Bronze and Silver Awards with the Cadet Force.

Technical Skills

Advanced Proficiency: R, Python, Microsoft Office Suite, LaTeX
Intermediate Proficiency: MATLAB, STATA, STAN, EViews
Basic Proficiency: JavaScript, React, C++, MySQL, HTML

Languages

Fluent: English
Limited Working Proficiency: German, Urdu, Punjabi