

# **ZAIN YOUSEF**

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## **PROFESSIONAL EXPERIENCE**

### **MYPINPAD**

**May 2019 - Nov 2019**

#### **Statistician (Contractor)**

Undertook a project assisting MYPINPAD's securities and compliance departments to achieve a Payment Card Industry Data Security Standard (PCI) certification for MYPINPAD's mobile payment authentication solution to allow the service to go to market.

#### **Key Responsibilities and Achievements**

- Investigated and completed combinatorics and probability calculations to analyse the risk of the mobile payment solution.
- Presented my analysis to the CEO of MYPINPAD and a third-party certification organisation.
  - Certification subsequently obtained in January 2020.

### **Cardiff & Vale University Health Board, NHS Wales**

**Jun 2019 - Sep 2019**

#### **Data Analyst (Full-time)**

Worked across two main projects: 1) creating an automated reporting system to analyse the performance of the Community Resource Therapy (CRT) team and 2) producing a discrete event simulation (DES) model to support the launch and running of an upcoming major trauma centre.

#### **Key Responsibilities and Achievements**

- Analysed the performance of the Community Resource Therapy (CRT) team with time-series plots based on various measures, for example: monthly discharge rate, monthly acceptance rate, number of hospital beds used, etc.
  - Operationalised this into an automated monthly report, through the automation of the data collation and analysis (utilising the programming language R with R Markdown).
- Used SIMUL8 to produce a discrete event simulation (DES) model for an upcoming major trauma centre in Cardiff. This model simulated patient inflow/ outflow, resources used and expenses within any given timeframe. In order to create the DES model, I used Microsoft Excel to calculate probability density functions (pdf) based on existing historical data.

### **Cardiff & Vale University Health Board, NHS Wales**

**Jul 2018 - Sep 2018**

#### **Data Analyst (Full-time)**

Completed a project for creating an automated system to analyse and monitor the mortality rate within each different medical division within NHS Wales. The purpose of this project, was to allow the NHS Wales executives to gain a greater understanding of the mortality rates across different divisions and whilst identifying how different factors collectively affect mortality.

#### **Key Responsibilities and Achievements**

- I used the programming language R with R Markdown to create a system which automatically produced the reports for each medical division from a dataset containing mortality data on over 100 different medical departments.
- The reports included SPC chart plots which were used to analyse monthly averages for aspect like mortality rate, expected mortality rate, length of stay, etc. The SPC charts included 95% confidence intervals and therefore any irregular months would be flagged to the Information's department at the health board for review.
- A multivariate logistic regression model was also included in each report which I created in order to recognise the extent to which each variable (for example: consultant treating the patient, risk of mortality, age of patient, hospital treated at, etc.) affects the mortality rate each department.

## OTHER EXPERIENCE

### VALE TENNIS ACADEMY

Jan 2018 - Sep 2018

#### Tennis Coach

- Coached children (aged from 4-12 years old) to play tennis every weekend.

### GREGGS

Aug 2016 - Sep 2017

#### Team Member

- Working across front of house (serving customers) and back of house (making pasties).

## EDUCATION

### University College London (UCL)

Sep 2018 - May 2021

#### BSc Statistics - Predicted grade: 2:1

- Recipient of the E.J. Gumbel Scholarship, a three-year academic scholarship, from the Statistical Science department at UCL.

### Stanwell Comprehensive School

Sep 2011 - Aug 2018

#### A-Levels

- 4 A-Levels: Mathematics (A\*), Further Mathematics (A\*), Welsh Baccalaureate (A), Economics (B).

#### GCSE's

- 16 GCSE's: All A\*-C including Mathematics (A\*), English Language (B), English Literature (B).

## INSIGHT DAYS / HACKATHONS

### MICROSOFT

Jan 2020 - Jan 2020

#### Insight Day

Invited to an insight day during which I learnt about Microsoft's work in quantum computing and how they are applying data science in industries like Bioscience and Energy.

### MICROSOFT X AMERICAN EXPRESS

Nov 2019 - Nov 2019

#### Data Science Hackathon Winner

Devised a technical solution with my group for aspects which affect delinquencies and defaulting on credit cards based on American Express data. The solution included various regression models which we created using Python, R and Microsoft Azure.

## TECHNICAL SKILLS

- |                                  |                         |
|----------------------------------|-------------------------|
| • R (advanced)                   | • R Markdown (advanced) |
| • SIMUL8 (intermediate)          | • Java (basic)          |
| • Microsoft Excel (intermediate) | • SAS (basic)           |

## OTHER QUALIFICATIONS

- i2c Level 1 Qualified Tennis Coaching Assistant
- Bronze, Silver and Gold Duke of Edinburgh awards

## REFERENCES

- Available on request.