## Abdullah Muhammad-Kamal

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#### **EDUCATION**

## UNIVERSITY OF WARWICK OCT 2017 – JUL 2021

BSc (Hons) Computer and Management Sciences

- Finalist in the annual Warwick Enactus 'Innovation Hub' Challenge
- Key modules include Databases, Algorithms, Design of Information Structures, Operating Systems and Computer Networks.

## TOWNLEY GRAMMAR SCHOOL

SEP 2015 - JUL 2017

A Levels: Mathematics (A) Chemistry (A) Biology (A)

COOPERS SCHOOL

SEP 2010 - JUL 2015

10 GCSE grades A\*-B including Maths, English and Triple Science

### **TECHNOLOGICAL PROJECTS**

# PREDICTIING DRUG-DISEASE LINKS WITH DISTRIBUTIVE AND SYMBOLIC METHODS (PYTHON, R AND PROLOG)

SEP2019 - PRESENT

- Collected and cleaned pharmacogenetic data from STRING, DrugBank, SIDER and DisGenNET databases to build a knowledgebase.
- Developed link prediction models using the PYKEEN tool on the knowledgebase.
- Improved and analysed the performance of different distributive methods provided by PYKEEN; TransE, TransE and ConvE.
- Predicted missing links using Top-Down Induction of Logical Decision Trees developed from the Prolog knowledgebase.
- Analysing and comparing the models produced using PYKEEN and Top-Down Induction of Logical Decision Trees.

#### SMART APPLICANT TRACKING SYSTEM (HTML, CSS, JQUERY AND PYTHON DJANGO)

JAN 2019 - MAR 2019

- Acted as the team's Business Analyst and frontend team member in creating a prototype for a smart application system.
- Led client consultation meetings to understand the stakeholder's existing environment, needs and concerns.
- Selected solutions that delivered the most value based on factors such as: scope, risk and reusability and capabilities.
- Used machine learning to rank applicants, based on application features such as skills and experiences.
- Awarded second place by Deutsche Bank out of thirty-two participating teams.

### DEPARTMENT STORE DATABASE MANAGEMENT APPLICATION (SQL AND JAVA)

NOV 2018 - DEC 2018

- Produced a database application to expand the services a department store offers.
- Wrote SQL schema describing the tables: inventory, orders, order products, staff and staff orders.
- Developed queries providing analysis on staff and product data E.G. highest selling products, highest selling staff.

#### **MULTITHREADED INTRUSION DETECTION SYSTEM (C)**

**OCT 2018 - NOV 2018** 

- Intercepting and parsing IP and TCP protocol layers.
- Identifying suspicious packets and producing a report containing a breakdown of the malicious activity.
- Implementing a threading strategy to allow code to deal with high packet throughput.

## **ROBOT MAZE (JAVA)**

OCT 2017 - NOV 2017

- Designing a robot exploration and navigation algorithms to successfully navigate through a maze.
- Enabling the robot to sense the location of the target and therefore be able to make decisions to move closer to the target.
- Implementing the Thremaux's algorithm to enable robot to learn from previous runs of a maze.

# **WORK EXPERIENCE**

### KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY | Visiting Student Research Programme Intern

SEP 2019 - PRESENT

- Working under the supervision of Prof. Robert Hoehndorf as part of the Bio-Ontology Research group.
- Worked on a project titled 'Predicting drug-disease links with distributive and symbolic methods.
- Created and analysed graph-based machine learning algorithms to predict missing links in pharmacogenetic data.
- Developed a network representing the interactions between drugs, genes and diseases using RDF and Prolog format.
- Presented my findings to an audience of Professors, Research Scientist and current PhD students.

### TEACH FIRST | Intern STEM Teacher

MAR 2019 - APR 2019

- Spent two weeks practically experiencing the STEM challenge through teaching at a state run non-selective secondary school.
- Taught database concepts and the python programming language, using live demonstrations, to children aged 11-16.
- Offered a full-time teaching role from my performance as a teacher and member of staff.

#### WARWICK AFRICA SUMMIT | Events Team Executive

OCT 2018 - APR 2019

- Organised a two-day conference on the social and economic development of Africa, hosting 20+ speakers and 500 attendees.
- Planned an exhibition/showcase for distinguished speakers, celebrating creative talent within students at the University of Warwick.
- Worked with the marketing team to devise an efficient digital marketing strategy through social media to maximise ticket sales.
- Successfully sold out tickets to 500 attendees' two weeks before the event

#### VOLUNTEERING

### WARWICK ISLAMIC SOCIETY | Charity Week 2018 Volunteer.

**OCT 2018 - NOV 2018** 

- Planned events to raise funds for orphans and children in the local area and worldwide.
- Coordinated events during the week to inform people of the mission of charity week and encouraging them to donate.
- Successfully raised the most in the Midlands with a total of £20,994.

### **EXTRACURRICULAR & SKILLS**

TECHNOLOGY: Proficient in Python, Java, HTML, CSS JavaScript and SQL; familiar with PHP and C++.

 $\textbf{SOFTWARE:} \ \mathsf{Microsoft} \ \mathsf{Office} \ (\mathsf{Word}, \ \mathsf{PowerPoint} \ \mathsf{and} \ \mathsf{Excel}), \ \mathsf{LaTex} \ \mathsf{and} \ \mathsf{BibLaTex}.$ 

LANGUAGES: English (Fluent/Native) and Yoruba (Fluent/Native).

**SPORT:** Captain of Coopers School and Townley Grammar School Basketball Team.