





# Farhan M. Abdul Qadir

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## Education

### King Fahd University of Petroleum and Minerals

BS Computer Science

September 2018 – May 2022 (in progress)

Dhahran, Saudi Arabia

> **Cumulative GPA: 3.97/4 (First Honors)**

> First Class distinction in all semesters

### International Indian School Dammam

All India Senior School Certificate Examination

April 2003 – May 2017

Dammam, Saudi Arabia

> Gold Honor Roll, CGPA 10

## Experience

### Research Assistant

May 2021 – Present

Center for Environment and Marine Studies, Research Institute, KFUPM

- > Used industrial and demographic data to model greenhouse gas emissions for the Middle East
- > Paper approved for a fully funded international conference by Undergraduate Research Office, KFUPM after enhancement
- > Driver at Fault Detection using deep learning

### Software Developer Intern

June 2020 – August 2020

Advanced Micro Technologies Co.

- > Developed Customer Relationship Management web solution using Java, Gradle, HTML, CSS, Apache
- > Found potential strategies by data extraction, clustering and analysis from inventory and customer database
- > Improved company project approval workflow time by over 50%

### Grader

September 2021 – Present

Information and Computer Science Department, KFUPM

- > Responsible for grading assignments of 100 students for Algorithms Course (ICS 353)
- > Appointed as grader from January 2022 - May 2022 for Graduate Deep Learning Course (ICS 504)

### Competitive Programming Club

September 2019 – Present

Member

- > Qualified to represent KFUPM in the 10th Gulf Programming Contest 2020 (Postponed due to COVID-19)
- > Secured 2nd Position in the placement competition held internally in the University

## Team Projects

### Arabic Sign Language Recognition

October 2021 – Current

Research Project

- > Normalized the video dataset recorded in KFUPM(CS department) to 80 frames
- > Performed word embedding to represent the ground text truth
- > Used encoder-decoder with attention and transformer model in PyTorch, with WER metric

## Riyadh Metro Route Map

January 2021 – April 2021

Team Leader

- Generated a visual transit network in Python from excel file containing list of stations and coordinates
- Implemented a graph of routes, stations and distances using the NetworkX library
- Calculates shortest and cheapest route given source and destination station using Matplotlib to display

## KFUPM Clubs Management Application

August 2020 – January 2021

- Developed for club leaders and members to manage club projects, resources and approvals
- Written in Java and MySQL, deployed Database in Cloud using Amazon Web Services RDS
- Utilised JavaFX, Glue4j Scene Builder, JFoenix Framework and CSS for frontend

## MailMerge Application

January 2019 – May 2019

Team Leader

- Full stack application that creates personalised PDF files from templates and sends e-mails to recipients
- Written in Java and utilised JavaMail API, JavaFX and iTextPdf library

## Honors and Awards

### Academic

- Full Tuition Waiver and monthly stipend from Ministry of Education in KFUPM (given to a handful of international students)
- National Entrance Examinations - Scored 98 in GAT(Qudrat) and 89 in SAAT(Tehseeli)
- Certificate of completion of Summer Undergraduate Research Experience program in KFUPM
- Certificates of Academic Excellence from Physics department in Physics 101 and 102
- Award for Excellence in Writing from English Language Department
- 790/800 in SAT Math, 110/120 in TOEFL IBT, 657/677 in TOEFL PBT

### Extracurricular

- Winner of last 4 badminton tournaments organised by KFUPM Sports Club
- Winner of U17 KSA Badminton National Competition and participant in Nationals held in Varanasi
- Multiple time winner of regional badminton championships
- Multiple time medalist in KFUPM Chess Blitz and Rapid Competitions
- Captain of KFUPM Chess Team participating in Collegiate Chess League for International Universities

## Selected Individual Projects

### Weather Phenomena Detection

Deep Learning using PyTorch

- Used custom self developed CNN models and several pre-trained models on a dataset procured by researchers last year
- Achieved close to state of the art results obtained by the researchers in their paper by using pre-trained Vision Transformer Model

### N Queens Algorithmic Solver

Artificial Intelligence algorithms in Python

- Implemented A\*, Genetic, Backtracking algorithms with filtering, heuristics to solve the N Queens problem
- Developed a Graphical User Interface to generate N\*N Chessboard with the solution using PyQt and PyGame

## Santorini Game

> Implemented Santorini, a turn-based strategy board game in Java

### Skills

**Programming Languages** Python, Java, C, C++

**Tools Libraries** PyTorch, Keras, Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn

**Relevant Courses** Machine Learning, Deep Learning, Big Data Analytics, Artificial Intelligence, Operating Systems, Data Structures, Database Systems, Algorithms, Computer Networks, Software Engineering Fundamentals, Discrete Structures, Linear Algebra, Web Development

**Leadership** Volunteer and Member of IET, VP of ToastMasters Club, Student Body Leader

**Languages** English, Urdu, Hindi, Arabic (intermediate)