

# ABDUL RAHMAN

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[arshanapps.com](http://arshanapps.com)

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## EDUCATION

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| 08.2015 – Present | Bachelor of Engineering (Computer Engineering) – Honours<br>NUS University, Singapore<br>ETH University, Switzerland – Semester exchange programme<br>Scholar of Temasek Education Foundation<br>GPA - 4.29/5 (Honours – Distinction) |
| 04.2010 – 05.2013 | Diploma in Information Technology with Merit<br>Diploma Plus – Minor in Psychology Fundamental<br>Temasek Polytechnic, Singapore<br>GPA – 3.92/4 (9 Distinctions and 14 A's)<br>Director's List for AY 10/11 & AY 11/12               |

## RESEARCH EXPERIENCES

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|-------------------|--|
| 08.2017 - Present | Application of Reinforcement Learning in Weather Routing - Dissertation <ul style="list-style-type: none"><li>- Optimize velocity of a vessel to reduce fuel consumption rate while meeting port schedules under harsh weather conditions using calculus of variation and Q-learning</li></ul> |
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## PROJECT EXPERIENCES

### Data Science

- Built Time series data classification for IoT sensors using RNN LSTM algorithm in keras deep learning framework to classify 10 dance moves with 98% accuracy
- Built CNN and RNN Image classification algorithms using python scikit-learn and TensorFlow environments to recognize Italian hand signs with 80% accuracy

### Mobile App Development

- Designed and Developed an Android application with media playback and push notification service using Firebase in Java. The app has garnered more than 300,000 downloads
- Leads a team and developed an iOS Financial planner application with Google drive integration in Objective-C

### Software Development

- Leads a team, conceptualized and developed a Java Desktop To-do list application that can be all managed by keyboard shortcuts for advanced users

### Embedded System Development

- Proficient with Computer architecture such as Superscalar, VLIW, Multi-core processors and hardware accelerators.
- Developed an ARM based embedded system that measures light, temperature and accelerometer readings in C language in LPC1769 microcontroller

## WORK EXPERIENCES

- 01.2018 – Present      Teaching Assistant – National University of Singapore, Singapore
- Assist Professors in teaching undergraduate computer engineering students in their capstone design project course where they have to built an wearable device that tracks and predicts dance moves using machine learning and IoT sensors
- 04.2013 – 05.2013      Technical Support Officer – Temasek Polytechnic, Singapore
- Assisted Lecturers in teaching freshmen students programming methodology and data structures
  - Modified and updated the student fitness web application in PHP
- 08.2012 – 12.2012      Project Manager Intern – Blue Glue (Youkilele) Ltd, Indonesia
- Leads a team in conceptualizing and building an Employee Task Management web application
  - Revamped Database system with new relational database for Manufacturing and Inventory departments

## PROGRAMMING SKILLS

(In order of decreasing familiarity)  
Java, Python, Keras, Tensorflow, scikit-learn, Android development, C, Assembly language, Verilog, SQL, C#, Caffe, Objective-C

## SOFTWARE SKILLS

Eclipse, Android Studio, Visual Studio, Github, LCPEXpresso, Jupyter Notebook, Xcode, Vivado, MS-Office

## LEADERSHIP

- 12.2012 – 12.2012      Delegate – Youth Model ASEAN Conference
- Discussed socio-political, environmental and economic issues prevailing in ASEAN region with the Singapore Minister of Culture, Community and Youth
- 07.2011 – 06.2012      President – IT Special Interest Group
- Liaised with Course Manager and Year Coordinators regarding the welfare of the students
  - Organized events, workshops and exchange programmes for students of Diploma in IT

## CONSCRIPTION

- 06.2013 – 06.2015      Emergency Ambulance Medic – Singapore Civil Defence Force-
- Provided fast patient service, life support and ambulatory care to extremely ill and injured patients in a stressful and constantly changing environment

## LANGUAGES

Tamil:            Mother Tongue  
English:        Proficient (level C2 on European Language Scale)  
Japanese:      Basic knowledge (level A1)

## HOBBIES

Hiking, Cycling, Current affairs, Tech enthusiast

## REFERENCES

Available upon request