

ABDUL RAHMAN

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EDUCATION

National University of Singapore (NUS)

08.2015 - Present

Bachelor of Engineering (Computer Engineering) – Honours
GPA - 4.29/5 (Honours – Distinction)
Scholar of Temasek Foundation Nurtures
ETH University, Zurich, Switzerland – Semester exchange programme

Temasek Polytechnic

04.2010 – 05.2013

Diploma in Information Technology with Merit
Diploma Plus – Minor in Psychology Fundamental
GPA – 3.92/4 (9 Distinctions and 14 A's)
Director's List in academic years 2010-2012 for being in the top 5% of the cohort

RESEARCH EXPERIENCES

Application of Reinforcement Learning in Weather Routing – Dissertation

08.2017 - Present

- Optimize velocity of a vessel to reduce fuel consumption rate while meeting port schedules under harsh weather conditions using calculus of variation, regularized recursive least square estimation and Q-learning

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 frameworks to recognize Italian hand signs with 80% accuracy

Software Development

- Designed and Developed an Android supplication app with media playback and push notification features using Firebase and Java, resulting in more than 300,000 downloads in [Google play store](#)
- Lead a team, conceptualized and developed a Java Desktop To-do list application that can be entirely managed by keyboard shortcuts without requiring a mouse to target advanced users

Embedded System Development

- Proficient with Computer architecture such as Superscalar, VLIW, Multi-core processors and hardware accelerators.
- Developed a custom processor similar to ARMv3 with ALU controllers and advanced features like pipelining and hazard detection as part of a course project resulting in attaining an 'A' grade
- Developed an ARM based embedded system that measures light, temperature and accelerometer readings in C language in LPC1769 microcontroller to monitor pollution in reservoirs

WORK EXPERIENCES

Teaching Assistant – National University of Singapore, Singapore

01.2018 – Present

- Mentor undergraduate computer engineering students in their capstone design project where they have to build a wearable device that tracks and predicts dance moves using machine learning and IoT sensors

Technical Support Officer – Temasek Polytechnic, Singapore**04.2013 – 05.2013**

- Taught freshmen students programming methodology and data structures resulting in students having a strong foundation in computer science and problem-solving skills
- Revamped the student fitness web application in PHP improving the user interface and compatibility with all browsers

Project Manager Intern – Blue Glue (Youkilele) Ltd, Indonesia**08.2012 – 12.2012**

- Lead a team in conceptualizing and developing an Employee Task Management web application in order to assign and manage tasks to employees effectively
- Revamped Database system with new relational database for Manufacturing and Inventory departments to reduce in reliance of excel sheets to manage data

PROGRAMMING & SOFTWARE SKILLS

(In order of decreasing familiarity)

Java, Python, Keras, Tensorflow, scikit-learn, Android development, C, Assembly language, Verilog, SQL, C#

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

LEADERSHIP**Delegate – Youth Model ASEAN Conference****12.2012 – 12.2012**

- Examined socio-political, environmental and economic issues prevailing in ASEAN region with the Singapore Minister of Culture, Community and Youth to ensure peace and prosperity in ASEAN region

President – Information Technology Special Interest Group (ITSIG)**07.2011 – 06.2012**

- Represented Diploma in IT students in highlighting their academic and administrative matters with Course Manager and Year Coordinators to ensure the welfare of the students are being sustained
- Organized events and academic workshops for students of Diploma in IT providing opportunities to learn beyond classroom setting

CONSCRIPTION**Emergency Ambulance Medic – Singapore Civil Defence Force****06.2013 – 06.2015**

- 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)

German: Basic Knowledge (level A1)

HOBBIES

Hiking, Cycling, Current affairs, Tech enthusiast