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# Amirul Ashraf

## Resume

### Introduction

Self-taught programmer with multiple year of experience working as a software engineer. Specializes in **web-based** solutions with technologies ranging from **Go** to React, from backend to frontend. Fast learner and quickly adapt to new technologies.

### Skills

- Proficient with server-side development using **Go**, Laravel, Ruby on Rails and .Net API
- Experienced in large micro-service architecture, high QPS, high reliability and big data system
- Familiar with modern **Single Page Application** utilizing ReactJS, Angular and the associated Node.JS ecosystem

### Experience

Dec 2018 - **Software Engineer, Backend**, *Grab*, Petaling Jaya, Malaysia.

Present  
(9 month) One of the earliest engineer of the new KL development center, assigned to the Safety team. Quickly adapt to Grab's vast backend architecture and helps bring the team up to speed. The assigned buddy for new Safety backend engineer.

- Implement and maintain Grab's safety related features such as customers face recognition integrations, textual **machine learning pipelines** and others.
- Designs and review features with high bandwidth and reliability requirement.
- Exposed to the culture and practices needed to work on a large **micro-service** architecture at scale.
- Implemented and deployed fixes for many outstanding bug affecting hundreds of thousands of customers.

April 2018 - **Senior Full Stack Developer (Contract)**, *Petronas ICT Sdn Bhd*, Kuala Lumpur.

Nov 2018  
(6 Months) **Design and build** an improved version of an existing gas monitoring system for Petronas Terengganu Operations Coordination Center.

- Improved upon an AngularJS frontend and a **.Net Web API** backend according to requirement.
- Develop in parallel with new gas pipeline simulation system from another development team.
- Designed a flexible data layer that can extract thousands of time-series values within milliseconds from tens of millions of records.
- **Profile and tune** MS-SQL database.
- General development

- Nov 2017 - **.Net Developer (Contract)**, *Petronas ICT Sdn Bhd*, Kuala Lumpur.
- Dec 2017  
(2 Months) Improve Bad Actor Management (BAM) an internal .Net system that manages bad actors such as damaged or defective equipment on Petronas's Infrastructure.
- Integrate with an existing IBM BPMs system as a transitional solution.
  - Integrate with an SAP system through SOAP.
  - General development.
- Nov 2014 - **Full Stack Developer**, *NetByteSEC*, Bangi.
- Oct 2017  
(2 Years 11 Months) ○ Developed DEALS, a website defacement tracker. Practiced peer review with other team members. Developed URL scraperservice, scraping from defacement databases as a backup to main scraper with **Phoenix framework**
- Developed a Quality Management System for a client with Ruby on Rails. **Implemented Integration and Feature testing with Rspec and Fabricator**. Integrated docker setup for easier deployment.
  - Improved **Brimir**, an **open source** ticket manager. Added GPG email decryption, encryption and verification. Added realtime chat functionality implemented with ReactJS and SSE. IntegratedCapistrano for deployment. Implemented other modifications as requested by the clients such as realtime activity logs, email cc/bcc, etc.
- June 2014 - **Backend Developer (Remote)**, *Coglab.Biz*, Hong Kong.
- Sept 2014  
(4 Months) Develop, test and maintain Ruby on Rails based website backend. Implement REST API server for Single Page Application and Mobile Application. Collaborate with Software Analyst, Frontend Developer and other parties involved with regards to application development.
- Continue development of a search service for thredup.com, based on Solr. **Reduced search indexing time by nearly 80%** through batching and offloading more work to database. Added other functionalities such as parallel queries
  - Developed API servers for other clients such as HKSpeak, Venipoints, Quolv.com and others.
- Jan 2013 - **Part Time Programmer (Remote)**, *Kriationz*, Bangalore.
- March 2014  
(1 Year 3 Months) Develop and deploy multiple PHP based solution.
- Improved fedena an open source school management system, based on Rails 2.3.5.
  - Developed CodeIgniter-based boat booking system for a local vendor in Aleppey.
  - Developed a taxi booking service and a hotel booking service with **Laravel**.

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## Education

- Oct 2017 **Bachelor of Science, Computer Science**, *International Islamic University Malaysia (IIUM)*.  
CGPA: **3.601**. Awarded "Best Computer Science Student" of the batch. Among subjects taken includes:
- Natural Language Processing
  - Machine Learning
- 2006-2010 **Malaysia Certificate of Education (SPM)**, *SMK Meru*, Klang.  
Achieved: **9A 1B**

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## Activities

2014-2016 **Associate of Computing Machinery International Collegiate Programming Contest, IIUM and elsewhere.**

- Participated in ACM-ICPC Asia Regional Singapore (Onsite) 2015 at National University of Singapore. Qualified in **top 60 team from 150 teams in Southeast Asia.**
- Participated in ACM-ICPC Asia Regional Kuala Lumpur 2014 at International Islamic University Malaysia.
- Participated in ACM-ICPC Al-Khwarizmi National Programming Competition 2016 at International Islamic University Malaysia. Achieved **2th place.**
- Participated in ACM-ICPC Al-Khwarizmi National Programming Competition 2014 at University Technology Petronas, Malaysia. Achieved 7th place.
- **Program Manager** of IIUM Code Jam 2015, an ACM-ICPC-like programming competition for IIUM student.
- Program Coordinator of IIUM Code Jam 2016.

June 2016 - **Codeknights.org**, Malaysia.

- June 2017 (1 year)
- Co-founded a platform to help Malaysian students train on competitive programming.
  - Host a competitive round every two weeks on time suitable for Malaysian students.
  - Responsibilities includes: Authoring contest question, coordinating with other problem setters, setting up the contest system and managing the server.

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## Other Projects

Jan 2018 - **TruID.me.**

Apr 2018 A blockchain verifiable - self-sovereign certificate wallet app.

- Developed a React-Native app that implemented a protocol called blockcert.
- Developed a reference blockcert issuer server with Spring Boot. Uses BitcoinJ as an embedded Bitcoin client.
- Implemented a custom protocol to securely send certificate to third party.
- Developed a ticket onboarding demo website that accept secure transfer of certificate from the app. The certificate acts as a verifiable ticket. e TruID as a ticketing system for an upcoming concert.
- Technology stack:
  - Spring 4, JPA, Spring Security
  - BitcoinJ.
  - PostgreSQL, Docker
  - Angular, Yarn, Typescript, RxJS
  - React, React-Native

Aug 2017 **Imbaspay, Binapavo Data Intelligence Sdn Bhd, Kuala Lumpur.**

- A prototype e-wallet app for the Malaysian market initially targeted towards small business especially those without a POS system.
- Spring Boot backend system with full suite of Unit Test and Feature Test.
- React-Native App on Android and IOS.
- Rich Single Page Application console frontend Angular 4.
- **Coordinate the app development team** during the development of the react-native app and utilized **GitlabCI** for consistent code quality among team members.
- Deploy and maintain the server and published the app for Android and iOS on their respective app store.
- The prototype allowed the business team to initiate a **partnership with a major bank in Malaysia.**
- Technology stack:
  - Spring 4, JPA, Spring Security
  - PostgreSQL, Docker
  - Angular, Yarn, Typescript, RxJS
  - React, React-Native

April 2016 **Autonomous Guided Vehicle Fleet Management System (Final Year Project), IIUM.**

A proof of concept system for managing a fleet of Autonomous Guided Vehicle (AGV). System communicates with miniature robots through Wifi and TCP.

- System developed with Meteor. Server UI is based on ReactJS and will show realtime data of the AGV fleets.
- Developed **Arduino** code for line-following AGV. Used PID controller algorithm for a smoother line-following behavior. AGV position is determined by a series of RFID tags, predefined routes and calculated timings.
- **Studied the scalability of server** which can be run as a cluster. Meteor+MongoDB was identified to be a bottleneck.