Abdullah Ahmad **Zarir**

✉ abdullahzarir@gmail.com | 🐙 zargit | in abdullahzarir

Exp**erience**

Stratocore Inc. | stratocore.com   *Ottawa, ON, Canada*
SOFTWARE ENGINEER   *Mar. 2024 - Present*
- Automation, DevOps, Integration, Optimization, Security, Cloud, RAG … issues requiring problem solving skills.

Amazon, Automatic Profitabilty Management | amazon.com   *Vancouver, BC, Canada*
SOFTWARE DEVELOPMENT ENGINEER I   *Mar. 2020 - Mar. 2023*
- Designed and partially implemented a data lake infrastructure catered towards serving MLOps pipelines.
- Worked with data scientists, product managers and other teams to automate multiple MLOps pipeline on AWS reducing the time to deploy trained models in production from experimentation.
- Collaborated with a team of 6 engineers to design, implement and maintain an ML Environment helping both data scientists and engineers in their experimentation and development work.
- Integrated automated testing for deployed pipelines and increased test coverage to 70% for existing codebase from 15%.
- Conducted interviews with other team managers and stakeholders to gather project requirements.
- Mentored interns to successful completion of their project and assisted team members with onboarding and other tasks.

SAIL (Software Analytics & Intelligence Lab) | sail.cs.queensu.ca   *Kingston, ON, Canada*
GRADUATE RESEARCH ASSISTANT   *Sep. 2018 - Sep. 2019*
- Authored two empirical research journal papers on large scale decentralized and distributed software systems.
- Built & maintained large scale crawlers written in python for mining software usage data.

TEACHING ASSISTANT   *Sep. 2018 - Dec. 2018*
- Mentored 6 groups of 36 students in their Software/Game Architecture course project in CISC 322/326.
- Evaluated and graded presentations and quizzes of 147 students in the Software/Game Architecture course (CISC 322/326).

Quintiq, a Dassault Systèmes company | 3ds.com/products/delmia/quintiq   *Kuala Lumpur, Malaysia*
SOFTWARE ENGINEERING INTERN, SQC   *Jun. 2017 - Mar. 2018*
- Learned proprietory languange QUILL in two weeks and implemented a supply chain simulation of a paper mill to monitor its KPIs in real time.
- Built a distributed and parallel testing framework for iOS and Android mobile devices reducing testing runtime by more than 80% based on the open-source Selenium and Appium automation library.

Dept. of Computer Science, IIUM | bit.ly/2FY5siA   *Gombak, Kuala Lumpur, Malaysia*
UNDERGRADUATE RESEARCH ASSISTANT   *Jan. 2016 - Apr. 2017*
- Collaborated on 5 reseach paper exploring Machince Learning and Cloud Computing.
- Implemented simulations and built models in C++, Python and Java as per specifications of the reasearch work.

TEACHING ASSISTANT   *Jan. 2014 - Apr. 2017*
- Conducted tutorial classes, designed & graded lab works and projects and mentored project groups.
- Courses: Computer Archi. & Assembly, Data Structure, Principles of AI, Web Programming, Calculus & Linear Algebra and C++ Programming.

Hon**ors & Awards**

2017	**Honorable Mention, (Team WF_please)**, ACM-ICPC Asia Regional	Mahidol University	*Nakhon Pathom, Thailand*
2017	**1st Place (Team Zeroth)**, Unicode Programming Competition	Monash University	*Kuala Lumpur, Malaysia*
2016	**2nd Place (Team WilderCodes)**, ACM-ICPC Malaysia National	IIUM	*Gombak, Malaysia*
2016	**1st Place (Team MasterMinds)**, Open Programming Competition	Universiti Sains Islam	*Nilai, Malaysia*
2015	**Honorable Mention (Team MasterMinds)**, ACM-ICPC Asia Regional	National University Singapore	*NUS, Singapore*
2015	**3rd Place (Team IIUM A) [Race Video - bit.ly/2NFaqXO]**, Intelligent Car Racing	Freescale Cup	*Johor Baru, Malaysia*
2014	**Honorable Mention (Team Void)**, ACM-ICPC Asia Regional	IIUM	*Gombak, Malaysia*
2014	**4th Place (Team Void)**, ACM-ICPC Malaysia National	Universiti Teknologi PETRONAS	*Seri Iskandar, Malaysia*
2012	**Honorable Mention (Team Origin)**, ACM-ICPC Regional	Daffodil University	*Dhaka, Bangladesh*

Tec**hnical Skills**

Programming Languages C/C++, Java, Python, JavaScript, Dart, Bash, SQL, NoSQL etc.
Frameworks & Libraries Flutter, AWS-CDK, OpenCV, TensorFlow, Scikit-Learn, Selenium, Flask, Android, NodeJS, jQuery, ReactJS, Laravel etc.
Cloud Services GitHub, AWS, Firebase, GCP, etc.

Projects

QIMP (Quick Index of Medical Products & Problems) | Google Play Store - https://rb.gy/xhodf *Apr. 2023 - Present*

- Designed and developed a cross platform app from scratch using Flutter with Firebase as the backend.
- Migrated an existing database from MySQL to real time document based database Firestore.
- Integrated dynamic links with google analytics to track user interaction with app content and custom ads.

   Tools: Flutter, Firebase, Google Cloud, Dart, NodeJs

Serving Captions for Images in Near Real-Time on Android *2017*

- Designed and developed a system to provide automated image captions for pictures taken with android mobile devices in near real-time.
- Built an image to text generation model based on Google's Inception-V3 network and trained on Microsoft's COCO dataset.
- Built an Android App to fetch captions for pictures from a trained image to text TensorFlow model set in an Ubuntu system at Digital Ocean through Firbase communicating with an Nginx server via a Nodejs script.

   Tools: Firebase, DigitalOcean, Ubuntu, NginX, Nodejs, Python, Java, TensorFlow, Android

Faulty Medicine Strip Detection in Conveyor Belt *2015*

- Designed and developed a system to capture, process, and filter out individual medicine strip from the video stream of a running conveyor belt.
- Built a simple ANN classifier using native python to classify faulty packaging of individual pills in a medicine strip.
- Built a tKinter based GUI interface for monitoring and reporting detection of faulty packaging of specific pills in a medicine strip.

   Tools: Arduino, C/C++, Python, OpenCV, Tkinter

CNC Machine Controller Program *2014*

- Developed from scratch a system that parses and executes G-code instructions to control the positioning of the nib of a pen/drill.
- Built a tKinter based GUI interface for writing G-code instructions and for controlling the CNC machine.

   Tools: Arduino, C, Python, Tkinter

Education

Queen's University | queensu.ca *Kingston, ON, Canada*

M.Sc. in School of Computing (Research) *Sep. 2018 - Exp. Sep. 2019*

- CGPA: 4.06/4.3
- Thesis: An Empirical study of the Ethereum Blockchain
- Courses: Software Re-engineering, Data Mining, Software Repository Mining, Deep Learning and Research Methods

IIUM (International Islamic University Malaysia) | iium.edu.my *Gombak, Kuala Lumpur, Malaysia*

B.Sc. in Department of Computer Science *Sep. 2013 - Apr. 2018*

- Major GPA: 3.92/4.0
- Academic Excellence Scholarship, Dean's List (Six Semesters)
- Selected Courses: Software Engineering, Algorithm Analysis & Design, Machine Learning, Natural Language Processing and Cryptography

Publications

First Author

- Zarir, A. A., Oliva, G. A., Jiang, Z. M., & Hassan, A. E. (2021). **Developing cost-effective blockchain-powered applications: A case study of the gas usage of smart contract transactions in the ethereum blockchain platform.** *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 30(3), 1-38.

Second & Third Author

- Amri, A. A., Zarir, A. A., & Ismail A. R. (2018). **Comparative Performance of Deep Learning and Machine Learning Algorithms on Imbalanced Handwritten Data.** *International Journal of Advanced Computer Science and Applications*, Vol. 9. No. 2.
- Diallo, L., Hashim, A. H. A., Olanrewaju, R. F., Islam, S., & Zarir, A. A. (2016). **Two Objectives Big Data task Scheduling using Swarm Intelligence in Cloud Computing.** *Indian Journal of Science and Technology*, 9(28).

Extracurricular Activity

CodeKnights (Online Programming Contest Platform) *Kuala Lumpur, Malaysia*

Founding Member *2016 - 2017*

- Organized programming contests curated for Malaysian undergraduate students and trained them for competitive programming.
- Designed and implemented problem sets for contests using Polygon system by Codeforces.

CommunityAction (Student-run Volunteer Organization in Bangladesh) | www.ca-bd.org *Bangladesh*

Logistics Executive *2011 - 2013*

- Gained experiance in planning and executing critical public events specially in conditions with scarce resources.
- Collaborated with CSR division of multiple companies and managed a diverse range of charity projects.

Others

Refrences *Available upon request*