SOFTWARE ENGINEER

ABANOB TAWFIK

CONTACT DETAILS

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PERSONAL PROFILE

A software engineer passionate about learning, self-improvement and teamwork. I am work driven and pride myself on my time management capabilities that allows me to always deliver projects on time. I make a great teammate who always pushes the team and myself to do their best. I always try to see the positive in every situation and bring the best out of everyone!

AREAS OF EXPERTISE

- SQL and MongoDb
- Java, Python, Javascript, Perl and Haskell experience
- Microsoft ASP.NET MVC, Web API experience
- Working knowledge of C, C++ and C#
- Angular Framework
- Microsoft Azure

INTERESTS

- Machine Learning
- Backend Development
- Full-Stack Development
- API Development
- System Modelling and Design
- UX design

REFERENCES

- Available upon request

EDUCATION HISTORY

UNIVERSITY OF NEW SOUTH WALES

Bachelors of Software Engineering (honours)
(4th year - graduating December 12, 2021)

- WAM (Weighted Average Mark): 74.692
  - top 10% of UNSW students
- Currently writing my thesis on Privacy Ensuring Fall Detection using Generative Neural Networks on mmWave data

Incomplete Bachelors of Mining Engineering (honours)
(2014 - 2016)

- WAM (Weighted Average Mark): 74.00
  - top 10% of UNSW students

EMPLOYMENT

FULL-STACK SOFTWARE ENGINEER INTERN

Maia Financial/Credabl - full time
June 2019 - August 2019
Sydney, Australia

PRIVATE TUTORING

Self Employed - part time
January 2018 - present
Sydney, NSW

WORK EXPERIENCE

MAIA FINANCIAL/CREDABL

- Accounting API Integrations: Developed code for retrieving balance sheet and profit & loss data from QuickBooks, MYOB and Xero accounting APIs to streamline and simplify the loan application process.
- Document Parser: Created a service that ran code inside Word documents to replace the code template with the output. This was a document generation tool that was planned to be used for generation of custom financial documents.
- Email notification: Created a service that would automatically send an email through the use of SendGrip API to notify the applicant and their nominated accountant at the end of the loan application.
- CI/CD: Created an Azure pipeline to automatically update the staging server upon pull request approval. Upon passing tests and approval from my supervisor, changes would be pushed to a seperate production server.
- Data Collection: Developed methods to extract and store form application data within a MYSQL database.
- Front End Code Redesign: Redesigned the code base for the front end to be more concise and extendable.
- Front End Design: Developed a responsive front end using Angular and Bootstrap. Many services written here were planned to be used in other projects throughout the company reducing workload for future projects.
- Linking Front and Backend: Built services in the front end to handle API calls to the backend.
- Web Services: Created many RESTful API endpoints using ASP.net for tasks such as data processing.
- Teamwork: Worked in a Agile work environment with stand ups, sprint planning and issue tracking using Jira in order to enabling clear communication between the team and myself.
- Unit Testing: Utilisted NUnit to create a set of unit tests for all backend services, ensuring functional correctness of the code I had developed.

PRIVATE TUTORING

- Computer Science: Taught the basics of programming, object oriented design, networks, databases and AI to multiple CSE students.
- 4 Unit Mathematics: Taught HSC topics of 4 unit mathematics and physics to grade 12 students.

PROJECTS

OUTBREAK TRACKER

- Developed a full-stack application that was able to detect outbreaks and future trends using CDC data and other APIs. The backend was written in C# and the front end was written using Angular.

RELIABLE PDF FILE SENDER/RECEIVER OVER A UDP SOCKET

- Developed and optimised a client/server type architecture where a receiver can request a pdf file, which will be transmitted reliably from a sender host over a UDP socket connection. Implemented the reliability features of TCP. This was written in Java.

PRIVACY ENSURING FALL DETECTION USING NEURAL NETWORKS

- Developing and researching a generative deep-learning model that uses mmWave point cloud data to detect abnormalities. This is being developed in Python using TensorFlow and Keras.

SHIPMENT PLANNER

- Created and designed an efficient scheduling tool for shipment orders using A* path-finding with an optimised heuristic. This was written in C#.