KERELOS TAWFIK

SOFTWARE ENGINEER

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PROFILE

I am a software engineering student studying at UNSW with 6 months of professional experience in full-stack web and application development. Team player with a strong work ethic and creative mind.

SKILLS

- Angular & React
- Unix/Linux POSIX Compliant Shell Scripting (Bash, Dash etc.)
- Microsoft ASP.NET, Full-Stack Web API
- Object Oriented Design
- SQL and MongoDb
- Full-Stack Development
- Java & C/C#/C++ experience
- Microsoft Form Recogniser API

EXPERIENCE

JUNIOR SOFTWARE DEVELOPER

MAIA Financial/Credabl

Dec 2020 - Jul 2020

- Website and API design.
- Independently created form recognition tool using newly developed (at the time) Microsoft AI Form Recogniser software and Azure Blob + related technologies
- Unit Tests and Integration Tests

EDUCATION

BACHELOR OF SOFTWARE ENGINEERING (HON)

UNSW

2021 - Present

BACHELOR OF SOFTWARE ENGINEERING (HON)

University of Technology Sydney
GPA - 73.25

2018 - 2021

PROJECTS

INVOICES API

- Developed full-stack web application that utilised Microsoft Form Recognizer when it was relatively new. This would read in invoice forms and extract the form data. The frontend was written using Angular, the backend was written using C#/ASP.NET and the database in Microsoft SQL.

WORK EXPERIENCE

MAIA FINANCIAL/CREDABL

- **Angular Development:** Developed frontend services using Angular 13.
- **Form Recogniser:** Created a service using Microsoft's Form Recogniser was new and created a standalone web application that reads invoice data and collates it for use.
- to notify the applicant and their nominated accountant at the end of the loan application.
- **Front End Code Redesign:** Refactored entire code base for frontend and backend.
- **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 REST API endpoints using ASP.net for tasks such as data processing.
- **Agile Design:** Developed software utilising an Agile design environment which involved, stand-ups, sprint-planning and issue tracking with Jira assisting in communication and quota management.
- **Unit Testing:** Utilisted MSTest to create a set of unit tests for all backend services, ensuring functional
- correctness of the code I had developed.

PROJECTS

abletothrive.com.au

- I created this website from scratch the company is NDIS registered
- Created user friendly design with accessibility options.
- Built a responsive design that works on devices of all sizes.
- Setup the domain and am currently maintaining the website. and adding new feat

Dungeonmania - Java Object Oriented Game

- Github Repository
- Me and my colleague refactored an existing codebase for game to take advantage of object-oriented design in Java where applicable. This involved redesigning code to utilise State Pattern, Observer Pattern, Builder pattern and other design patterns to improve the system.
- Implemented Snake entity in the game exploiting a composition over inheritance model with battle interactions with the player and stealing treasure from the player using the shortest path possible via Dijkstra's algorithm. This Snake utilised multiple design patterns and although incomplete due to the time-frame conveys an understanding of OO principles
- Implemented enemy goal functionality utilising composite pattern to correctly follow open-closed principle.

Pushy - Github File Repository System in Dash (Debian Almquist shell)

- Github Repository
- Designed a POSIX-Compliant file repository system mimicking github file repository system in DASH .
- This involved creating a .git repository containing index files & object files, commits, commit logs etc. Created via commands essentially mimicking the exact functionality and design utilised by Github.
- Wrote 10 thorough tests that test the functionality of the pushy-add pushy-rm etc. with all tests passing.
- Command/Argument parsing to parse certain options like git -rm --cached --force etc.