Jed Simson

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Dedicated and passionate software developer with full-stack experience in high throughput transactional systems. My primary experience is with a .NET backend and Angular frontend, but I am always looking for new frameworks to try out. I strive to find new challenges and problems to solve, with the goal of designing robust solutions in interesting problem spaces.

EDUCATION

2014 - 2017   **University of Waikato**

- Bachelor of Computing and Mathematical Sciences (Hons)
- Awarded First class honours - project: Open Source Linear Genetic Programming
- A grade average, GPA 7.3
- 3rd place, Tertiary category, NZ Cyber Security Challenge 2016

2009 - 2013   **Te Awamutu College**

- NCEA Level 3 w/ Merit
- NCEA Level 2 w/ Merit
- NCEA Level 1 w/ Excellence

EXPERIENCE

Jun 2019 - Present   **Junior Software Developer - Vista Entertainment Solutions Ltd.**

A continuation of responsibilities from the graduate position focussed only on the Loyalty product, with time spent mentoring the newly formed Vouchers and Gift Cards team as well as graduates and interns. Joined the Security Tech Council with the additional responsibility of promoting security best practices amongst developers. Notable projects include:

- Implementation of a subscription-based model for Loyalty memberships:
    - Subscription/subscriber management UI using Angular
    - Subscription processing: purchase/renewal/change/refund
    - Subscription management API: cancel/hold/CRUD
- Refactored authentication/authorisation pipeline for core API to allow multiple authentication types and improved role management
- External integration API to allow sending notifications to Loyalty members
    - License validation as part of authorisation pipeline
    - Asynchronous notification processing

Jan 2018 -
Jun 2019

Graduate Software Developer - Vista Entertainment Solutions Ltd.

Maintained two of the core products – Loyalty, Vouchers and Gift Cards. Applied an agile methodology as part of a continuous release cycle. Responsibilities ranged from developing features and fixing bugs to internal technical support. Worked primarily in a large .NET codebase with SQL Server as the persistence layer. Notable projects include:

- Connector system to queue incoming Loyalty member transactions and forward to Movie (a Vista subsidiary) for use in near real-time data analysis
- Design and implementation of a queue-based pipeline for generating voucher barcodes with the primary purpose of avoiding concurrency issues
- Re-design and implementation of the Loyalty points engine. Required the migration of a large amount of legacy code to a new processing pipeline as part of a refactoring effort to improve future maintainability

Nov 2016 -
Feb 2017

Development Intern - Vista Entertainment Solutions Ltd.

Worked on a project concerned with implementing a custom rule-based   system and inference engine for targeted advertising for in-cinema promotions, to eventually be integrated into the existing product. Furthermore, I worked as part of an existing development team, where I primarily performed bug fixes and feature work, utilising an Agile methodology.

Nov 2015 -
Jan 2016

Electronics Assembler/Tester/Programmer

Responsible for assembling, testing, programming, and repairing bluetooth automative diagnostic units, packaging products for customers, organising delivery of packages, and some documentation of processes involved.

SKILLS

GENERAL

- Agile software development
- Team collaboration
- Strong communication
- Passionate about documentation

TECHNOLOGIES

Tools

- Git + gitflow
- GitHub, GitLab, TFS
- Gradle
- Jenkins
- Powershell, bash

Languages

- C#
- TypeScript
- Python
- Java
- Kotlin
- HTML, CSS, JavaScript

Frameworks/Databases

- .NET
- ASP.NET Web API
- Entity Framework
- Angular
- Vue
- Flask
- SQL databases: SQL Server, MySQL, PostgreSQL
- NoSQL databases: MongoDB, Redis

INTERESTS

MUSIC

I am an avid musician and love to write and perform music whenever the opportunity arises. I have performed in many groups over the years and have had success providing music for private functions and studio sessions.

PROJECTS

LGP - A robust Linear Genetic Programming implementation on the JVM
https://github.com/JedS6391/LGP

Developed in completion of my Honours degree, this software package provides a framework for solving problems using a linear genetic programming technique. This project is fully open-source and has seen usage by students at the University of Waikato, as well as researchers from other universities internationally.

The framework is implemented in Kotlin and features a highly modular and extensible API design, a suite of unit tests, and a CI/CD pipeline. The package has also been reviewed and submitted to the Journal of Open Source Software (DOI: **https://doi.org/10.21105/joss.01337**).

Artefacts of the framework have been made available on Maven, making it suitable for integration into other projects.

Reddit saved post viewer - An interface for viewing your saved posts on reddit
https://github.com/JedS6391/reddit-saved-post-viewer-web (frontend)
https://github.com/JedS6391/reddit-saved-post-viewer-api (backend)

This project has an Angular frontend which consumes an API built with Flask on the backend.

The integration with the reddit API is an interesting problem with challenges such as implementing the OAuth flow and asynchronous processing of what could potentially be a large data set returned. I decided to have a separate backend abstraction over the reddit API to prevent the frontend from having to manage the asynchronous processing logic, as well as keeping the option for other frontends available.

Referees will be made available upon request