Personal Profile IIT Assignment - 1

Personal Information

Name - Grant Nicholas
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Student Email Address - S3954897@student.rmit.edu.au
Github Repo - https://github.com/S3954897/IIT_assign1
Github Page - https://s3954897.github.io/IIT_assign1/index.html

Nationality and Culture

- Australian, European heritage
- Languages spoken - English

Education and Qualifications

- Completed 2 years of Bachelor of Electronic Engineering at USQ - Deferred
- Diploma - Project Management
- Diploma - Business Management
- Cert IV - Training and Assessment
- Trade Certificate - Radio Fitter Mechanic (Electronic Systems)
- Year 12 – 1988 - St Brendan's College – Yeppoon Queensland

Personal Fact/Hobbies

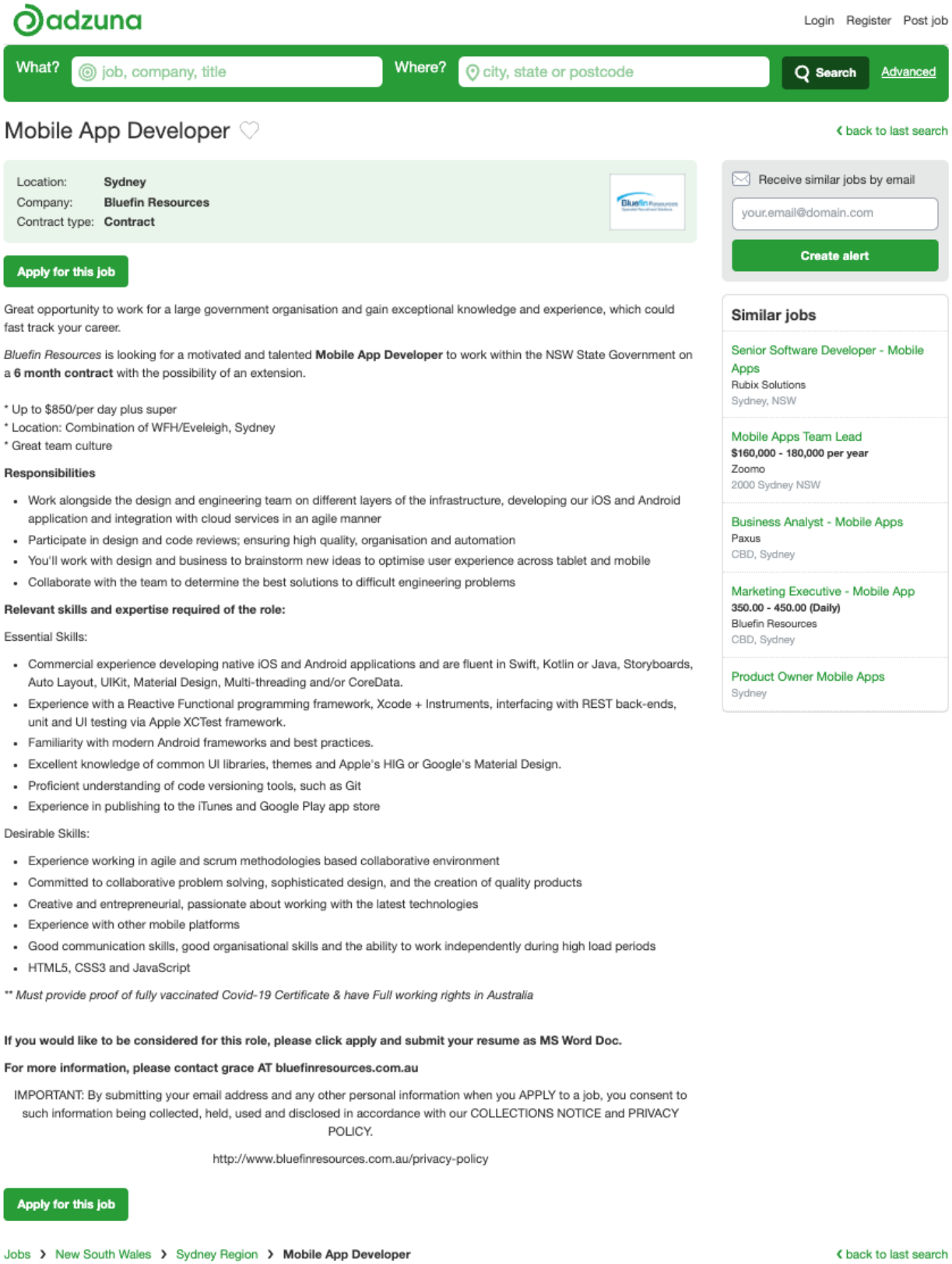
My love of fishing prompted a friend and I to begin our own startup company and releasing a Mobile Application called “iDfish” that has been live on the Apple’s App Store and Google Play for the last 6 years. I am also an avid cross country mountain biker. I ride local trails around the Brisbane area for fitness and fun.

Interest in IT

- **My interest in IT (Information Technology) and when it started.**
    - I have an interest in advanced technological systems. For example, I am interested in and follow the progress of topics like the James Webb Space Telescope, Space x, Starlink satellite system, self-driving cars, the International Thermonuclear Experimental Reactor (ITER), just to name a few. My interest in IT began in 1980 at the age of 9 when my parents bought a "Soundic Pong Console. This was my first introduction to IT, and close to the beginning of the consumer IT evolution. In 1981 I upgraded from the 6-game monochrome gaming console to a personal computer. The Commodore VIC-20 was where I had my first introduction to BASIC programming language. From this point forward I have always gravitated to technologies and computers. My first job outside of school was with the Royal Australian Navy as an electronics weapon systems technician specialising in Radar/Sonar and digital control systems.
- **My decision to come to RMIT (Royal Melbourne Institute of Technology).**
    - My decision to come to RMIT through OUA (Open Universities Australia) was born out of necessity because of my startup company. At this time, we have outsourced the programming to a local third-party provider and have found that it is exceedingly difficult to get what we want. On many occasions we have not been satisfied with the outcome. We have attempted to find alternative suppliers several times, but the size and complexity of the application has been insurmountable for anyone that reviews the project.
- **What I expect to learn at RMIT.**
    - I want to be abreast of current standards, terminology and processing standards so I can perform changes and upgrades to the iDfish Application in house. Larger upgrade requirements I will project manage the team so we can achieve our desired outcomes with tighter control over the timelines and progress. I will also be able to participate in these changes and upgrades as a member of my own team.

Ideal Job

<https://www.adzuna.com.au/> *(Job link no longer active)*



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Mobile App Developer

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Location: **Sydney**
Company: **Bluefin Resources**
Contract type: **Contract**

Apply for this job

Great opportunity to work for a large government organisation and gain exceptional knowledge and experience, which could fast track your career.

Bluefin Resources is looking for a motivated and talented **Mobile App Developer** to work within the NSW State Government on a **6 month contract** with the possibility of an extension.

* Up to $850/per day plus super
* Location: Combination of WFH/Eveleigh, Sydney
* Great team culture

Responsibilities

- Work alongside the design and engineering team on different layers of the infrastructure, developing our iOS and Android application and integration with cloud services in an agile manner
- Participate in design and code reviews; ensuring high quality, organisation and automation
- You'll work with design and business to brainstorm new ideas to optimise user experience across tablet and mobile
- Collaborate with the team to determine the best solutions to difficult engineering problems

Relevant skills and expertise required of the role:

Essential Skills:

- Commercial experience developing native iOS and Android applications and are fluent in Swift, Kotlin or Java, Storyboards, Auto Layout, UIKit, Material Design, Multi-threading and/or CoreData.
- Experience with a Reactive Functional programming framework, Xcode + Instruments, interfacing with REST back-ends, unit and UI testing via Apple XCTest framework.
- Familiarity with modern Android frameworks and best practices.
- Excellent knowledge of common UI libraries, themes and Apple's HIG or Google's Material Design.
- Proficient understanding of code versioning tools, such as Git
- Experience in publishing to the iTunes and Google Play app store

Desirable Skills:

- Experience working in agile and scrum methodologies based collaborative environment
- Committed to collaborative problem solving, sophisticated design, and the creation of quality products
- Creative and entrepreneurial, passionate about working with the latest technologies
- Experience with other mobile platforms
- Good communication skills, good organisational skills and the ability to work independently during high load periods
- HTML5, CSS3 and JavaScript

** *Must provide proof of fully vaccinated Covid-19 Certificate & have Full working rights in Australia*

If you would like to be considered for this role, please click apply and submit your resume as MS Word Doc.

For more information, please contact grace AT bluefinresources.com.au

IMPORTANT: By submitting your email address and any other personal information when you APPLY to a job, you consent to such information being collected, held, used and disclosed in accordance with our COLLECTIONS NOTICE and PRIVACY POLICY.

http://www.bluefinresources.com.au/privacy-policy

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Zoomo
2000 Sydney NSW

Business Analyst - Mobile Apps
Paxus
CBD, Sydney

Marketing Executive - Mobile App
350.00 - 450.00 (Daily)
Bluefin Resources
CBD, Sydney

Product Owner Mobile Apps
Sydney

Jobs › New South Wales › Sydney Region › **Mobile App Developer**

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- **A description of the position, and particularly what makes this position appealing to me.**
    - This is a team orientated app development role with a focus on fast paced staged results on a range of current programming frameworks. It also includes current database and cloud server access techniques that I would benefit from being proficient such as multi-threading.
- **A description of the skills, qualifications and experience required for the position.**
    - To be successful in this role I will need to have the following personal skills:
        - Solution orientated.
        - Lateral thinker.
        - Clear communicator.
        - Can work in a team environment.
        - Can function under pressure.
    - To be successful in this role I will need to have a thorough knowledge and understanding of all the following:
        - Current programming languages for both android and iOS platforms.
        - Current interface design standards including being familiar with all the current UIKits and how they can best be implemented.
        - Back-end data access and processing from mobile platforms.
        - Current programming fundamental with understanding of storyboarding wireframing and version control.
        - Publishing knowledge to bring finished outcome to market.
- **A description of the skills, qualifications and experience I currently have.**
    - I have the necessary personal skills and have worked in many environments requiring the personal skills necessary for this role.
    - I have had introductory exposure to most of the necessary knowledge for this role, but I have numerous holes with some of the languages and processes required that would prohibit my complete technical understanding of the overall requirements. I do not have the formal qualifications in any of the requested essential skills listed.
- **A plan describing how I will obtain the skills, qualifications and experience required for the position, building on those I have now.**
    1. Complete a Bachelor of Information Technology with an emphasis on Mobile programming, database application, and mobile application design.
    2. Self-educate skills and create real world examples of the requested skills.
    3. Design/build and implement smaller projects using the skills required for the role. (This practical implementation of the necessary skills helps cement understanding and demonstrates to a potential employer the required skills")

Personal Profile

https://www.16personalities.com/enfj-personality
https://github.com/S3954897/ITT_assign1/blob/main/emtrain_learning_teaching.png
https://github.com/S3954897/ITT_assign1/blob/main/the_personality_lab.png

Project Proposel

Overview

Using a mobile device such as a phone to scan a serial number of a bike, e-bike, e-scooter and/or mobility scooter to then record and store this item specific information against an individual's personal account in a cloud-based server. This will help to deter would be theft and subsequent sale of stolen items. This registration data can be accessed by a user looking to register a new item or check if an item that is being purchased second hand has been flagged as stolen. The system would also allow one user to transfer item registration to another as proof of a legitimate sale transaction.

Motivation

My family members and I have had several bicycles stolen over the years. Each bicycle can be individually identified by a serial number stamped into the frame. Unfortunately, there is no central location to track and store these serial numbers, so they are ineffective as a means of tracking the legitimacy of ownership or status. By creating a public registration system that can be easily accessed and utilised, this rectifies this problem by making the sale of the stolen bicycle more difficult.

'In response to increasing concerns about stolen bikes across Victoria, Bicycle Network undertook a detailed investigation into the common characteristics of bike theft cases.

We found that:

- The number of bicycle thefts reported in Victoria has increased by 81.2 per cent in the past 10 years
- Only 9 per cent of bike theft cases are solved
- Bike thefts at car parks and multi-dwellings are growing by 40.7 per cent each year
- Only three Victorian local government areas have experienced no year-on-year growth in bike thefts

The results highlight that bike theft remains a poorly resolved issue across metropolitan and regional Victoria, and may worsen into the future without proper action being taken.' (Bicycle Network Theft Report 2011-2020, July 2021, page 3).

Description

My bike register would be a web based multiplatform system that can be accessed either by mobile device or desk top computer.

User generated accounts that record the identification and contact details of the account holder. Name, Current Address, Profile Picture, Email Address and Mobile Number

Account legitimacy would need to be verified with a mobile number and/or email address. In addition, two factor authorisation (2FA) security will be integrated into each account to ensure secure access by only the account holder.

Once a user account has been successfully established and verified, bicycles can be added to the account. Bicycles would contain the following information:

Serial number, Type, Make, Model, Year of Manufacture, Colour, Place of Purchase, upload a photo of the bicycle, upload proof of purchase receipt and status of the bicycle (for example – Current Owner, For Sale or Stolen).

The user can store up to one (1) bicycle on the free system. To store more than one (1) bicycle then the user would need to subscribe for five (5) additional storage locations.

Mobile device applications would include the optical character recognition feature that could be used to read and then populate the serial number field of the bicycle form.

If an owner of a registered bicycle were to sell a bicycle, they would flag the bicycle status flag as "For Sale." A potential buyer could go to the mobile app and scan or enter the serial number. The buyer

would receive the “For Sale” verification notification. As part of the transaction, the bicycle would be transferred to the purchasing users account with all the associated details including the original proof of purchase etc.
A bicycle that has been stolen can have its status changed to “Stolen.” In this instance there can also be a field made available for the police report reference number with relevant details of where the report was made and to whom. Now when a potential buyer scans or enters the serial number, they will receive a “Stolen” notification. This will simultaneously notify the registered owner of the bicycle's location. The potential buyer will also be presented with a questionnaire regarding the details of the contact with the stolen bicycle and this will be provided to the legitimate owner.
Secondary advantages to the user of the register will be the ability to create a report for insurance companies that list the users registered bicycles and provide proof of purchase details. In the event of a claim these details are requested by the insurance company.
Additional commercial advantages of the register will be the ability to provide targeted advertising to users of insurance companies, bicycle shops or bicycle events happening in the area using geo-fencing features.
This system can be used for e-bikes and e-scooters as well as mobility scooters. With the values of these items in thousands of dollars, it is a logical step to create this register. This process has truly global potential and is not restricted to the Australian market.
Future additions that may be considered is to have a secondhand bicycle sales platform. Resembling carsales.com or bikesales.com.

Tools and Technologies

- Server – SQL Database cPanel
- Html editor - Atom
- Xcode – iOS compiler
- Android Studio – Android compiler
- Github – code repository
- Teams – team project management
- Photoshop – artistic editing of interface
- Illustrator – artistic editing of interface

Skills Required

- Skill required include have the programming knowledge for the following languages and software
- Swift – used for the programming language for the iOS operating system
- Kotlin – used for the programming language for the Android operating system
- HTML – Used to build the front end of the web interface
- PHP – Used for the backend of the web interface
- SQL – Used to create the database

Outcome

With this project completion there will be an international database for the storage and tracking of bicycles, e-bikes, e-scooters and mobility scooters. This will act as a deterrent for the would-be criminal and also give law enforcement a tool for tracking and tracing these items. This will decrease the amount of theft and increase the amount of cases solved.

Additional benefits include the ease of access and security of documentation for insurance policies and claims and the registered pawn brokers can have security in ensuring a products legitimacy prior to any exchange occurring.

Reference

- Alexander Miller, Dr Nicholas Hunter, 31 August 2021, *Bicycle Network Theft Report 2011-2020*, Bicycle Network, viewed 19 March 2022, <https://s23705.pcdn.co/wp-content/uploads/2021/09/Bicycle-Network-theft-report_2011-2020_v1.4.pdf>
- Adzuna Australia [online], viewed 19 March 2022, <https://www.adzuna.com.au/>
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- The Personality Lab [online], viewed 19 March 2022, <https://www.thepersonalitylab.org/>