Technical Competencies

ITC303 - G5 (Group 5) Technical Competencies Document

Technical Competencies

Below are the technical competencies as supplied by members of Group 5 (G5). The competencies aim to demonstrate that the team is capable of completing the project for the Department of Customer Service (DCS). The project will involve Amazon Web Services (AWS) and Machine Learning both of which the team have little experience with. The team has lots of experience with programming, databases, software development and networking. They are currently undertaking self study and learning to further enable themselves in the fields of ML and AWS. This combined with the support of David Tien the team will be able to complete the project.

Andrew smith

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Programming experience

- Java
- Python
- HTML
- CSS
- Kivy
- SQL

Database experience

- MySQL
- SQLite
- JSON-formatted databases

Mobile applications development

- Android Studio
- Kivy for Python

Additional point

- I have also worked on an artificial neural network for classifying four different types of fruit.
- Completed AWS Certified Cloud Practitioner Training (Exam Pending)

Adam Blewitt

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Skills

- System administration in an AWS environment
- Programming in
 - Java,
 - o web (html, js, php)
 - Python
 - C (embedded)
 - o CRBasic
- TCP/IP Networking inside and outside of an AWS environment
- Electronics (prototyping, MCU programming)
- Industrial communications (ModBus, DNP3)
- SCADA System configuration
- Communications (Cellular / Radio)

Experience

- 9 years as a system integrator
- Experience is system automation
- Data transfer and conversion (system to system, API to API)
- Working with public and private sectors delivering projects evolving around environmental monitoring (flood warning, compliance monitoring, wave and current monitoring)
- Completed AWS Certified Cloud Practitioner Training (Exam Pending)

Patrick Funnell

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Experience

- Programming
- Automated / IOT gardening
- IT technician and ex-acting IT supply consultant at Charles Sturt University (Computer Shop).

Languages

- Java
- Python
- VBA / VB
- Batch
- ASP.NET
- C#
- MySQL

Software Packages

- Access DB
- Excel
- Visual Studio & Visual Studio Code
- Eclipse (Java)
- Bit Bucket

Darren Sheehan

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Programming

- Python
- Java
- SQL
- VBScript
- PowerShell
- C#
- PHP
- ASP
- .Net Razor Pages
- HTML, JavaScript, and CSS.

Database platforms

- MS SQL including Reporting Services and Integration services,
- MySQL
- SQLite
- unique multivalue databases such as Rocket UniVerse.

Experience

- 9 years IT employment.
- Senior Applications and Projects Officer managing projects
- designing and programming front end and back end systems for a bank in a highly regulated environment that demands 24/7 uptime

Cameon Nyberg

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Skills

- Git usage
- deployment tools
- Programming

basic AWS interactions.

Programming

- Python
- PowerShell
- PHP
- JavaScript
- (Lua)
- SourcePawn (a scripting language, similar to C)
- Java

Experience

Video game development

Upskilling Progression

It has been identified early on that no one on the team is a Amazon Web Service (AWS) expert and no one has experience with Machine Learning (ML). When the team was informed that their project will involve both, each member began to upskill themselves in these areas. Each member has taken the digital classroom training AWS Cloud Practitioner Essentials provided by AWS. This training was taken to prepare ourselves for the AWS Certified Cloud Practitioners exam which is a prerequisite for working with the Department of Customer Service and to familiarise themselves with the AWS features they will encounter.

The team has also invested time into following tutorials on SageMaker, learning fundamentals on ML, Support-Vector Machine and brushing up on python skills, amongst other things.

Support

As specified above the team has no real experience in Machine Learning. Even with their own learning the team will undoubtedly need support. This support will be supplied by the course lecturer David Tien. David Tien is highly experienced in machine learning and has published over 100 papers many of which are machine learning focused.