

# Custom Data Solutions Internship

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## ABSTRACT

This poster describes the internship experience of Mark Smith, a third year Bachelor of Computing Systems (BCS) student at Eastern Institute of Technology (EIT) in Hawkes Bay.

Mark worked as a software developer with Custom Data Solutions Ltd (CDS) at their office in Ossian Street (Ahuriri), Napier. CDS was busy creating a custom business application for mobile technology when Mark began working with the team. The user interface for this application was Marks' main focus for the internship and required that he learn the C++, Qt (cute) and QML (Qt Meta Language) programming languages.

**Keywords:** Work Integrated Learning; Internship, Software Development

## 1. INTRODUCTION

EIT's Bachelor of Computing Degree is well respected by many employers, and one feature of the degree that separates it from other similar degree programs is the internship.

The internship ties the tuition given by the EIT to a practical learning experience. By the end of the internship the intern contributes constructively to the sponsor's business. Learning the technologies involved in creating a mobile application complemented what Mark had learnt during the BCS course.

Mark Smith's internship sponsor was Custom Data Solutions Limited, which was founded in 1998 in Napier (Ministry of Business, Innovation, and Employment, 2017). Furthermore, Mark's employment with Custom Data Solutions is continuing beyond the internship. Mark Smith was also a great example of a mature adult student, who had a previous career as an industrial technician, and has transitioned successfully to the IT industry.

## 2. THE LEARNING EXPERIENCE

C++ and Qt were completely new to Mark, as were the core tools used in creating the application. Please refer to Qt 4.8 (2016) for a brief description of this language.

Guidance from experienced programmers provides valuable information for an intern and can be applied immediately and in a practical way. The poster indicates some of the learning experience, particularly with QML interface development. According to Introduction to the QML Language (2016), a knowledge of JavaScript is also necessary.

The actual poster also describes how these programming languages work together to produce a cross-platform application.

## 3. THE OUTCOME

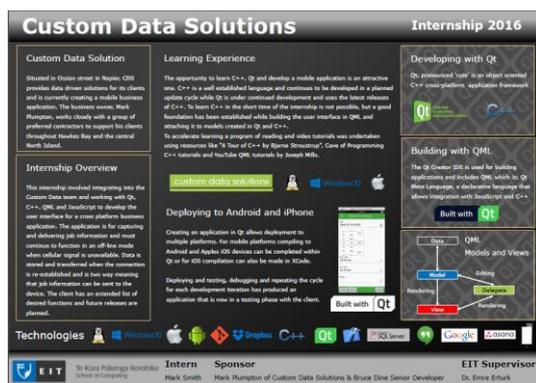
Mark has become confident in using QML and his knowledge of Qt and C++ is growing. Custom Data Solutions has offered him a position as they continue to develop the next version of their application.

## 4. PROCESS

The BCS degree program has prepared Mark for employment in the IT industry and the added practical experience of the internship has provided accelerated learning in a productive environment.

## 5. REFERENCES

- Introduction to the QML Language. (2016). Retrieved from <http://doc.qt.io/qt-4.8/qdeclarativeintroduction.html>
- Ministry of Business, Innovation, and Employment. (2017). Custom Data Solutions Ltd. Retrieved from <https://www.companiesoffice.govt.nz/companies/app/ui/pages/companies/902736/detail>
- Qt 4.8. (2016). Retrieved from <http://doc.qt.io/qt-4.8/index.html>



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