# Carpooling Application (Yearlong project) U

Summary: I developed a carpooling (Android) application for my fourth year project. It harnesses Facebook, Google and Firebase technologies to produce an interface for drivers and passengers to match, assists with navigation and allows passengers to see how far their ride is.

Team size: 2

Development Methodology: SCRUM

Languages: Java(Android) + JSON

**Overview**:

The exiting project “ePool” was developed as my fourth year project for my Software Engineering Degree. It’s a real-time carpooling application for Android. The accompanying Research Report can be downloaded here.

It has a two-tier client-server architecture. It leverages the Facebook Graph API for authentication and event management, Google Maps Application (and API) for visual map displays, calculating distances and navigation, and Firebase as a backend for handling driver-passenger pairing and updating the driver’s location in real time.

**Justifications**:

Material Design was used for its aesthetic because of its simplistic and natural design; a key focus was on the usability of our application.

Facebook was used because it’s widely used throughout all generations, automatically authenticates subsequent accesses after the first sign-in, has a pre-existing event management service and generates app-specific ID’s which are used to identify users in the application.

Google Maps was used because it’s pre-installed on most Android phones and provides the ability for real-time navigation to all passengers on a driver’s route. The Google Maps API was used because of its visually appealing map display and optimised multi-point route calls which returns both distance and estimated time.

Firebase was used for the backend because of its rapid syncing ability because it dynamically updates all clients in real-time and for future development into the Google Cloud Platform for server-oriented implementation of push notifications.

# Calendar Updater (Datacom Internship)

Team size: 4 + SM

Development Methodology: SCRUM

Languages: C# + HTML + CSS

University time tables

Microsoft Azure was used to host the several components

Webjobs – Pull off the university specific queue and upload the event to the students Office365 account

Office 365 – SDK was in development so I created a temporary SDK to use for pushing calendar events and posting emails to users.

# Gambling Intervention Application (Real world Client) U

Team Size: 9

Development Methodology: SCRUM

Rotating Roles

# Obfuscation Application (Security) U

# Parallel Programming Website

Teaching students about parallel programming concepts

# 3D Games in Unity

Astroids game

# Cinema Manager

Java

Client-Server while using Maven

Projects

ePool - Carpooling Application

Phobia – 3D Dungeon Crawler

[NAME HERE] –Virtual Art Presentation

Prototype X - Simple Avoider

No Frills – Simple Platformer