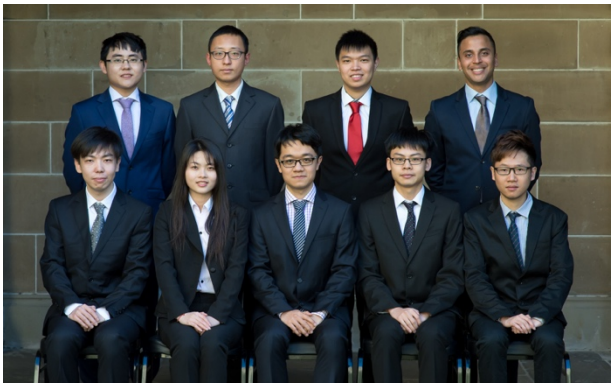
Software Engineering

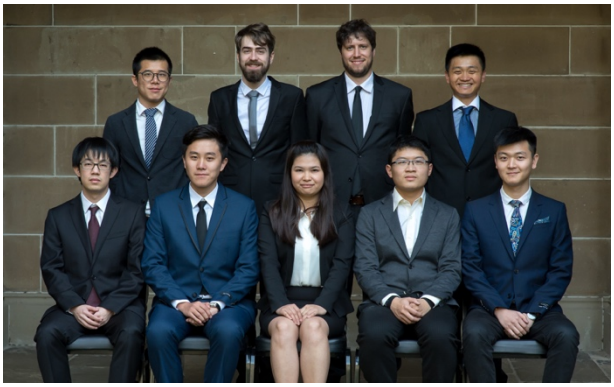
National Institute of Circus Arts Performance Software



Xuanxi Chen; Changchang Wang; Borui Chen; Xuanxi Chen; Qi Fan; Shu Hui; Roger Li; Ankit Agrawal; Johan Albert

Circus skills are generally thought of as being learned through apprenticeship, from master to student. This requires years of training, with tricks and secrets only passed on to the deserving few. NICA is a national arts training institute that offers Australia's only Bachelor of Circus Arts open to students. The aim of this project is to build a system that will help standardise education across NICA faculties. Furthermore, the system will include full body kinematics tracking for comparative analysis and feedback on student performance. This will be achieved through a course management system tailored-made for circus education, which is accessible through an iPad.

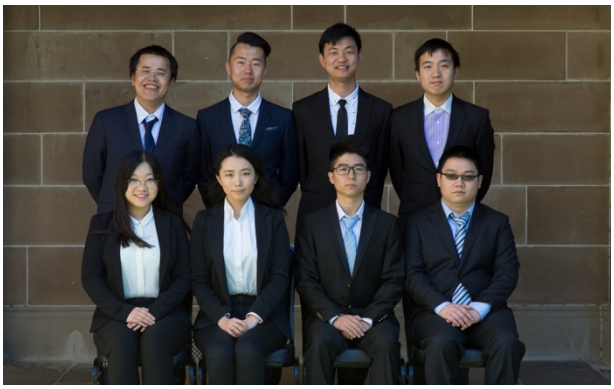
Touch Frame



Xing Hu; Dan Li; Kun Qin; Di Mao; Huixiang Zheng; Zheng Chai; Daniel Chiuchiarelli; Zeyu Ye

The existing TouchFrame App is a mobile application with the goal of connecting relatives with their elders, and making elderly people's lives more safe, fun and enjoyable. While the app is targeted towards the general public, there are three target users — 'elders', 'relatives' and 'carers'. App users can send photos and messages to each other. The receivers are then able to like and comment on photos or messages. The TouchFrame project aims to provide a cross-platform analytic interface/dashboard that helps carers manage their clients. This analytic platform provides visualisation, searching, administrative tasks and more. This project will use the latest technology stack to build a scalable system that helps carers with decision making. This will be particularly useful for carers at retirement villages, as well as family members looking after their elders.

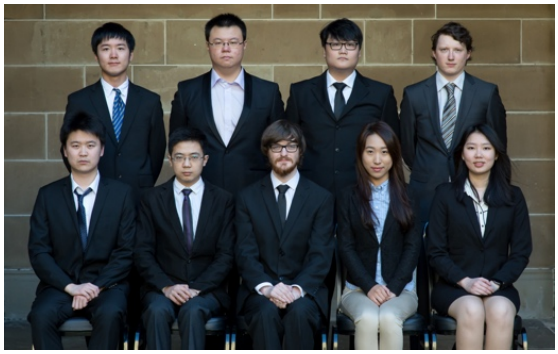
Autism Game — The WhizKid Trains App



Liang Wen; Hailun Tian; Tian Zhang; Xue Jiang; Boqin Hu; Federico Malesani; Daniel Edwards; Ruoke Sun; Bofan Jin; Fei Tang

The WhizKid Trains App is an iOS application that helps children with autism develop lifelong skills and have fun. The app keeps track of children's activities inside the games. The data collected will then help parents and researchers better understand autism. There will be a supportive website to present the data, which will be kept anonymous for researchers. This application can help make life easier for families with autistic children. It has great market potential, especially since there is not much helpful information available for parents.

Real-time Analysis Platform for Interactive Data-mining (RAPID)



Charles Talbot; William Tio; Jessica Tobagus; Dongge Liu; Qian Wen Zhang; Junjie Xu; Nicholas Cook; Shengshuo Zhang; Dongyu Zhao

The internet supplies us with more information than we have ever encountered before. The task of many software developers in this day and age is to harness this data in a manner that is useful to the wider world. RAPID is a platform to perform real-time analysis of tweets from around the world. This project's goal is to implement an SQL-like query language to the stream of tweets that RAPID supplies. This will allow clients of the system to specify their search in detail for use in commercial data mining.

My Employability

Jingcheng (Kimple) Ke; Mingyou Fang; ned Rummeroy; Albert Wang; Ziyuan Wang; Zemeng Wang; kaiqi Yang; Erwin Fernandez; Chunyi Guan

The University of Melbourne is focused on building students' employability and improving graduate job outcomes. Educational institutions worldwide are under pressure to provide measurable outcomes around how they are building student employability. Employers are also seeking ways to manage and motivate their workforce. The My Employability project aims to develop a global platform to measure the employability of students and employees. Students could undertake the assessment at any time during their studies, as well as to measure the impact of a Work Integrated Learning (WIL) experience. Employers could monitor the employability development of their employees. The platform would provide income to the University through licences to global education institutions, employers and third party data companies.

Graphical User Interface (GUI) for a Surgical Simulator

Liwei Wang

The University of Melbourne's Virtual Reality Temporal Bone Surgical Simulator is a virtual reality simulator with haptic (tactile/force) feedback to train ear surgeons. Users can see the temporal bone on screen has a 3D effect through 3D glasses. The haptic device provides force feedback in three dimensions. The present program interacts with users through command prompt, with all the data management conducted manually. The aim of this project is to develop a graphical user interface for the simulator to provide a better user experience for both standard users (students, doctors) and administrators.

Project Green

Arjun Chaudhary

This project will establish the first wave of a sensor network through the University Precinct. The project will demonstrate research potential, public education and engagement, and social communication, with the aim of promoting activity and nature awareness. Sensors will continuously monitor air temperature, relative humidity, noise levels and light levels (LuX), as well as carbon monoxide (CO) and nitric oxide (NOx) concentrations. This data will be channelled into the AURIN research data platform, which will provide a unique data layer and future capabilities demanded of AURIN for real-time data analytics. It will also benefit City of Melbourne's 'Urban Forest Visual Map'.

ParkSafe

Naman Gupta

This application allows you to park your car at private spaces, for a fortnightly/monthly basis. There are many unutilised private properties or malls at populated localities which can be utilised as parking spaces. This offers a profitable opportunity for both the owner and individuals seeking a parking space at a cheaper price. This application is targeted towards populous cities like Beijing, Mumbai and Sydney.