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Smart People Award
智慧市民獎

HONG KONG
ICT AWARDS
2018 香港資訊及
通訊科技獎

Background and Objective
背景及目的

The Hong Kong ICT Awards aims at recognising and promoting outstanding information and communications technology (ICT) inventions and applications, thereby encouraging innovation and excellence among Hong Kong's ICT talents and enterprises in their constant pursuit of creative and better solutions to meet business and social needs.

The Hong Kong ICT Awards was established in 2006 with the collaborative efforts of the industry, academia and the Government. Steered by the Office of the Government Chief Information Officer, and organised by Hong Kong ICT industry associations and professional bodies, the Awards aims at building a locally espoused and internationally acclaimed brand of ICT awards.

There are eight categories under the Hong Kong ICT Awards 2018. There is one Grand Award in each category, and an "Award of the Year" is selected from the eight Grand Awards by the Grand Judging Panel.

Hong Kong ICT Awards 2018: Smart People Award is established to recognise innovative development of ICT products / solutions or ICT-enabled services with the following objectives:

1. To promote the rights of the disadvantaged groups to participate and contribute to the development of information society

2. To recognise the ICT innovations that address the challenges facing the ageing society

3. To promote the open data / big data applications that contribute to improving the quality of life of people

香港資訊及通訊科技獎旨在表揚及推廣優秀的資訊及通訊科技發明和應用，以鼓勵香港業界精英和企業不斷追求創新和卓越，謀求更佳和更具創意的方案，滿足企業的營運需要，造福社會。

通過業界、學術界和政府的共同努力，香港資訊及通訊科技獎於二零零六年成立。香港資訊及通訊科技獎由政府資訊科技總監辦公室策動，並由香港業界組織及專業團體主辦，目的是為香港建立一個廣受香港社會愛戴、並獲國際認同的資訊及通訊科技專業獎項。

2018香港資訊及通訊科技獎設有八個類別的獎項。每個類別均設有一個大獎，而最終評審委員會從所有大獎中甄選出「全年大獎」。

「2018香港資訊及通訊科技獎：智慧市民獎」旨在表揚社會各界致力發展創新資訊科技產品，並投入資訊科技於服務中，目的如下：

1. 推動弱勢社群參與及促進資訊科技社會發展的權利

2. 表揚各資訊科技創新項目，以回應老齡化社會面臨的挑戰

3. 推動開放數據／大數據的分析及應用，以提高市民生活質素

Message from Organiser
籌辦機構獻辭

HONG KONG
ICT AWARDS
2018 香港資訊及
通訊科技獎

HKCSS 社聯

Mr. CHUA Hoi Wai
Chief Executive
The Hong Kong Council of Social Service

蔡海偉先生
香港社會服務聯會—行政總裁

Innovation and technology provide generous new opportunities for improving the life quality of a large number of citizens in domains such as employment, education, social economy and communication. Nevertheless, there are still many less-privileged groups being deprived of the benefits that such opportunities has brought along.

Over the years, The Hong Kong Council of Social Service (HKCSS) has been working closely with different sectors to promote digital inclusion. In response to the growing ageing population, HKCSS has specifically installed a work unit last year to promote gerontechnology which primarily aims at enabling independent living and social participation of senior citizens.

This time, we are honored to have organised the Smart People Award, comprising of the 3 streams of Smart Inclusion, Smart Ageing and Citizens Data Applications. We thank the tremendous support from our partners and the community in this meaningful endeavour. We are impressed by a large number of entries, showcasing many tailor-made and purpose-built solutions and applications for citizens with various needs. We firmly believe that as technology further develops, its potential to empower people would also grow. We are prepared to meet the many challenges ahead, and are at the same time excited in looking forward to realizing the infinite potential such inventions are to introduce.

My heartfelt congratulations to all winners and participants on their success and trust that their commitment in building a just and caring information society will result in a better future for all.

創新和科技在就業、教育、社會經濟、大眾傳播等不同的領域為市民帶來大量的新機遇去改善生活。儘管如此，仍有不少弱勢社群未能享受這些良機所帶來的裨益。

多年來，香港社會服務聯會（社聯）一直與許多不同界別緊密合作，推動數碼共融。為應對人口高齡化的挑戰，社聯更於去年成立專責部門推動樂齡科技，協助長者自主生活及參與社會。

今次我們很榮幸得以籌辦「智慧市民獎」，當中分為三大組別：智慧共融、智慧樂齡及市民數據應用。我們感謝各合作夥伴和社區鼎力支持這項饒富意義的活動。眾多的參賽項目所展示的解決方案及應用都因應市民不同的需要度身訂造，而且目標明確，令人讚嘆。我們堅信隨著科技的進一步發展，它提升人類能力的潛質也會增長。我們一方面準備迎接面前各種挑戰，同時亦期待這些發明為未來帶來無窮無盡的發展潛能。

我謹恭賀各得獎者及參賽者成功，並相信他們會積極建立一個公平及關愛的共融社會，為我們帶來更美好的未來。

HONG KONG ICT AWARDS 2018 香港資訊及通訊科技獎

HONG KONG COMPUTER SOCIETY
IT Shapes the Future

Mrs. Agnes MAK, MH, JP
Distinguished Fellow
Hong Kong Computer Society

麥鄧碧儀女士, MH, JP
香港電腦學會一院士

Congratulations to all winners of Hong Kong ICT Awards 2018: Smart People Award! I feel honoured to be the Chairperson of the Final Judging Panel. I involved in the Hong Kong ICT Awards for over 10 years, and have been impressed by the strong messages and the insightful wisdom of many wonderful entries year after year.

The entrants of the Smart People Award this year have all very clearly demonstrated their in-depth understanding and corresponding solid experiences with the needs and challenges faced by the target groups and the public. My sincere congratulations on their success and commitment in producing innovative solutions and applications in fostering better living.

I trust that the entrants would also be able to induce further impact beyond the competition and the Award. I sincerely wish that there are continuous driving forces coming forward in perfecting the solutions and applications to benefit the community and globally-connected information world.

恭賀所有2018香港資訊及通訊科技獎：智慧市民獎的得獎者！我很榮幸成為評審委員會主席。在過去十多年參與香港資訊及通訊科技獎中，我對每年各參賽項目帶來的亮點及智慧都印象難忘。

今年智慧市民獎的參賽隊伍對其服務對象及公眾都有深入觀察，了解他們的需要及所面對的挑戰。我衷心祝賀他們成功，並透過他們創新的方案及應用，創建一個更好的未來。

我相信參賽隊伍可以在比賽和獎項以外發揮更大的影響力，祝願他們持續優化其方案及應用，讓更多社區以致全球網絡相連的世界受益。

Smart People Award Judging Panel
智慧市民獎評審委員會

Hong Kong
ICT Awards
2018 香港資訊及
通訊科技獎

Names are listed in alphabetical order by surname 以英文姓氏排序

Front row, from left to right 前排（由左至右）	Ms. Alice SO; Mrs. Agnes MAK, MH, JP; Prof. WONG Yu Cheung; Dr. Edith MOK, MH 蘇雅麗女士；麥鄧碧儀女士, MH, JP；黃於唱教授；莫關雁卿博士, MH
Back row, from left to right 後排（由左至右）	Mr. Peter MOK; The Hon. Charles MOK, JP; Prof. Christine FANG, JP; Mr. Alex HUNG, MH; Mr. CHUA Hoi Wai; Ir. Stephen LAU, JP; Ms. Rebecca CHOY, Mr. Kenny YIU; Prof. YEUNG Yuet Bor; Dr. John FUNG 莫偉軒先生；莫乃光議員, JP；方敏生教授, JP；洪文正先生, MH；蔡海偉先生； 劉嘉敏工程師, JP；蔡美碧女士；姚金鴻先生；楊月波教授；馮一柱博士

Chairperson 主席	Mrs. Agnes MAK, MH, JP Distinguished Fellow, Hong Kong Computer Society 麥鄧碧儀女士, MH, JP 香港電腦學會 院士
Members 成員	Ms. Rebecca CHOY Founder & Chair, Golden Age Foundation 蔡美碧女士 黃金時代基金會 創辦人及主席 Prof. Christine FANG, JP Adjunct Professor, Department of Social Work and Social Administration, The University of Hong Kong 方敏生教授, JP 香港大學 社會工作及社會行政學系實務教授 Mr. Alex HUNG, MH Founding Chairman, Hong Kong New Emerging Technology Education Association 洪文正先生, MH 香港新興科技教育協會 創會主席

Members 成員	Ir. Stephen LAU, JP

Ir. Stephen LAU, JP
Secretary General (Honorary), Hong Kong Computer Society
劉嘉敏工程師, JP
香港電腦學會 秘書長（名譽）

Mr. Michael LEUNG, MH
Chairman of Executive Committee,
The Hong Kong Down Syndrome Association
梁建文先生, MH
香港唐氏綜合症協會 執行委員會主席

The Hon. Charles MOK, JP
Legislative Councillor (Information Technology),
Legislative Council of the HKSAR
莫乃光議員, JP
香港特別行政區立法會 立法會議員（資訊科技）

Dr. Edith MOK, MH
Vice Chairperson, Hong Kong Society for Rehabilitation
莫關雁卿博士, MH
香港復康會 副主席

Mr. Peter MOK
Head of Incubation Programme,
Hong Kong Science & Technology Parks Corporation
莫偉軒先生
香港科技園公司 創業培育計劃主管

Ms. Alice SO
Senior Manager, Entrepreneurs Team,
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蘇雅麗女士
香港數碼港管理有限公司 創業家團隊高級經理

Prof. WONG Yu Cheung
Associate Professor, Department of Social Work,
The Chinese University of Hong Kong
黃於唱教授
香港中文大學 社會工作學系副教授

Mr. Kenny YIU
Immediate Past Chairman,
Hong Kong Wireless Technology Industry Association
姚金鴻先生
香港無線科技商會 上屆主席

Smart People Grand Award
and Smart People (Smart Ageing) Gold Award
智慧市民大獎
及 智慧市民(智慧樂齡)金獎

Caritas Information Technology Advancement Centre / Caritas Hong Kong ― Services for the Elderly
香港明愛資訊科技創建中心 / 香港明愛安老服務

eCare® - Wireless Elderly Care Management System
eCare® - 無線安老服務系統
www.citac.hk
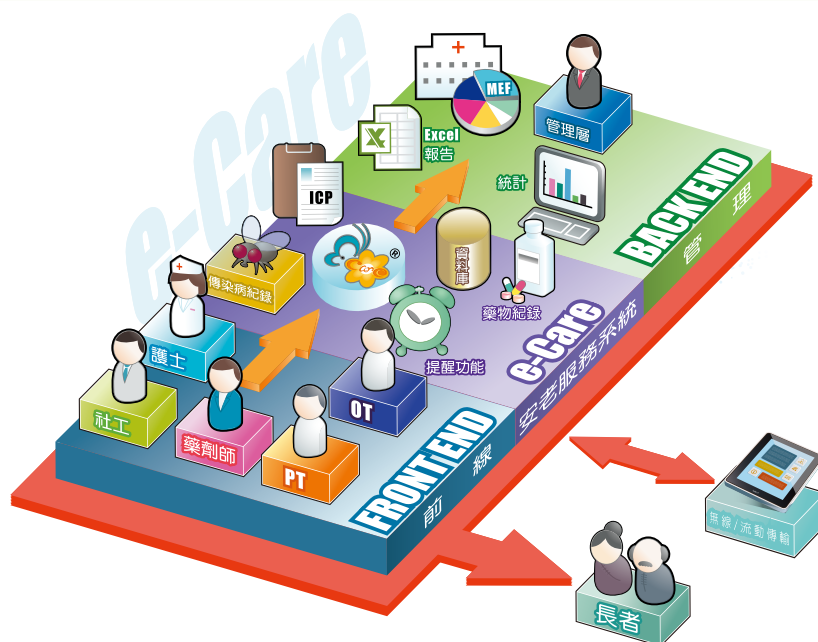
eCare® Wireless Elderly Care Management System is a web-based system that runs under the ASP model, serving over 100 residential care homes in Hong Kong. It aims to reduce administrative workload of frontline caregivers and enhance data accuracy, reducing errors and thus providing caregivers more time for focusing on caring for the residents in the care homes.

eCare® is designed to facilitate routine operations, data centralizations, management, statistics and analysis. It contains assessment tools (MDS-HC standard), Individual Care Plans (ICPs), reports, statistics, and drug lists etc. The system has open interface to connect with outside systems such as community pharmacies, CRMs, accounting systems etc. It can connect with wireless mobile healthcare devices to enable mobile care management.

eCare®無線安老管理系統是一套以ASP模式運作的網上系統，現已為香港超過100間安老院提供服務。它旨在減少前線護理人員的行政工作量，並提高數據的準確性，減少人為錯誤，從而提供更多時間讓護理人員專注於護理院友的工作。

eCare®能促進日常操作，讓數據集中管理，統計和分析。它包含評估工具（MDS-HC標準）、個人護理計劃（ICP）、報告、統計數據、管理藥物及藥紙等。系統提供開放接口與社區藥房、CRMs、會計系統等外部系統連接。系統亦可連接無線流動醫療設備，以實現院舍及未來家居安老的移動護理管理。

eCare® is for monthly subscription with a small fee per resident and the system is open for users' review with constant free updates. Using a web-based system allows residential care homes to save resources for managing and purchasing their own IT systems.

eCare® is developed by a team of youths from different sectors who were not initially trained as programmers but later developed their interest in programming. They became professional system developers under the training of Caritas I.T. Advancement Centre, Caritas Hong Kong.

eCare®是以網上月租形式運作，院舍只需負擔以院友數目計算的基本費用，便可隨時以網上方式使用系統及享有系統定期免費更新服務，節省院舍自行購置系統的費用，以及系統管理的人力資源。

eCare®是由來自不同領域的年青團隊開發的，他們最初並沒有受過IT的專業培訓。香港明愛資訊科技創建中心後來培養了他們對程序設計的興趣，並成為中心的專業程序設計員。

全新無線及
流動護理功能
多款 I.C.P.選擇等等...

core®

一套香港人研發及
最多非牟利機構使用的
安老院管理系統

CITAC
明愛資訊科技創建中心
Caritas Information Technology Advancement Centre

Comments from Judging Panel
評審委員會評語

The eCare® system is comprehensive and well-received by the end users. The Applicant shows persistent efforts in upgrading the system, such as the application of wireless technology in delivering services. The system is developed and supported by in-house groomed IT professionals.

此解決方案為一個全面而認受性高的管理系統。得獎單位展示其對系統升級方面的持續努力，如對無線技術於服務中的應用。同時，此系統的開發及支援均由其內部培訓的資訊科技專業人員負責。

Smart People (Smart Ageing) Silver Award
智慧市民(智慧樂齡)銀獎

Hong Kong Pharmaceutical Care Foundation Ltd. / Chuk Lam Ming Tong C&A Home for the Aged / Information Processing Consultants Ltd.
香港藥學服務基金有限公司 / 竹林明堂護理安老院 / 資訊系統顧問有限公司

SafeMed Medication Management Matrix
配安心藥物管理系統組合
www.pcfhk.org/en/

SafeMed Medication Management Matrix (SMMM) is a smart and multifaceted solution that integrates the professional knowledge of pharmacists with information technology, automation technology and Internet of Things to offer a spectrum of appliances and capabilities to address different operational difficulties in the existing labour intensive and fallible manual tasks associated with medication management process occurring in old age homes (OAHs), rehabilitation centres and day care centres.

Built with a library of drug images, common drug regimens and gatekeeping measures against drug-related problems, SMMM incorporates this pool of intelligence into simple purpose-built digital mechanics to accurately and efficiently guide all medication management stages, including medication history taking, visual guides for drug trays preparation, blister packing or interfacing to automatic dispensing and packing machines, as well as real-time and web-based mobile devices to support timely drug administration procedures with drug duplication monitoring, reminders and alerts.

SMMM is a revolutionary, sustainable and affordable gerontechnology option with flexibility to cater different operating models at various elderly service units, streamlining medication management operations, minimizing repetitive hand-operated routines and sparing manpower for enhancing healthcare delivery as proven by its fast adoption at over 15 OAHs across Hong Kong and Macau since market launch in 2017.
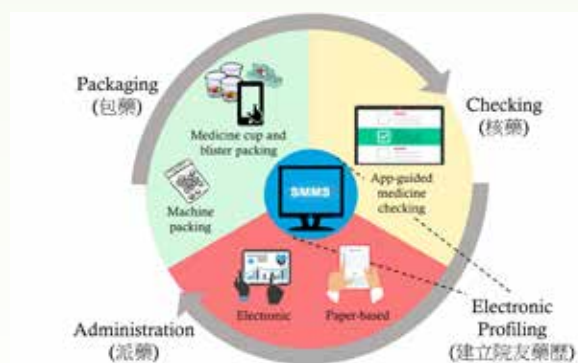
安老及康復院舍的藥物管理牽涉人手操作，耗用人力亦容易出錯。配安心藥物管理系統組合(下稱配安心)針對此難題，融合藥劑師的專業知識、資訊科技、自動化科技和物聯網，提供多元的智能解決方案，滿足不同院舍運作需要，提升藥物管理水準。

配安心提供網上建檔系統，以完整的藥物資料庫支援院友有關資料的準確輸入。這些信息會在互連的系統上被分析轉化成簡明的提示，引導用戶快而準地完成各藥物管理工序，如以自動化包藥或圖象模擬引導執藥、提示準時派藥、引導用藥監察等。

配安心對任何院舍來說都是革新、靈活、可持續的樂齡科技選擇。它優化了院舍的藥物管理，減少出錯機會和令緊絀的人手得以回歸前線護理工作，成效已獲港澳超過十五間院舍肯定。

Comments from Judging Panel
評審委員會評語

The application demonstrates an innovative solution with high adoptability in addressing the needs in medication management in elderly homes.

此應用程式展示了一項創新及易於被採納的解決方案，以應對現時安老院舍藥物管理方面的需求。

Smart People (Smart Ageing) Bronze Award
智慧市民(智慧樂齡)銅獎

Eldage Ltd. 傳耆有限公司

Eldage
傳耆
www.eldage.com

Eldage is a social enterprise, developed by Hong Kong's leading digital marketing agency Fimmick, integrating traditional wisdom, modern knowledge and digital marketing strategy, through O2O (Online to Offline) business model to bring about innovation and sustainability, into traditional culture.

Eldage wishes to create social, financial and environmental values in 3 aspects. 1) Use online (e.g. social media) and offline (e.g. craftsman's interview) platforms to encourage inter-generational communication and social engagement in society, including the elderly from pre-internet era and younger generation in digital age. 2) Bring financial returns by delivering workshops with local craftsmen, selling handicraft products, and collaborating with commercial and academic sectors. 3) Run business in an eco-friendly way with digital promotions and communications (e.g. recruit workshop participants and provide customer services through online platforms) to reduce environmental footprint.

「傳耆」是數碼營銷公司Fimmick旗下的一家社會企業，揉合傳統智慧、現代元素和數碼營銷策略，以O2O（Online to Offline）形式讓傳統文化有創新及永續的空間。

「傳耆」希望以三個範疇創造社會、財富及環保價值。一、採用線上（如：社交媒體）及線下（如：人物專訪）的渠道促進社會各階層人士，包括年長一輩及數碼新生代跨代溝通、社會共融及社區參與。二、透過舉辦活動（例：工作坊）、銷售產品（例：傳統手工藝）及與商界學界合作以達至最基本自負盈虧的原則。三、以減少污染環境為本，我們的商業活動多以數碼方式推廣及執行，例如於網上招募工作坊參加者、以線上方式與消費者交流和聯繫，以減少耗費印刷品。

Comments from Judging Panel
評審委員會評語

The project offers an online selling platform for the traditional business of Hong Kong. It brings great social benefits to the city while having a self-sustaining business model.

此項目為香港傳統行業提供網上銷售平台，使它具備可持續發展的商業模式之同時，亦為城市帶來相當大的社會效益。

Smart People (Smart Ageing)
Certificate of Merit
智慧市民(智慧樂齡)優異證書

Koln 3D Technology (Medical) Ltd.
科能三維技術(醫療)有限公司

Metal Bio-printing of Orthopaedic Implant
骨科植入物的金屬生物打印

medical.koln3d-tech.com

Koln 3D Technology (Medical) Limited specializes in tailor-made artificial metal implants. Through our breakthrough in 3D-printing of a replica of talus, we have demonstrated great capability in design and high efficiency in manufacturing metal implants.

With our Customizable Bio-conductive 3D Printing Technology, we can directly manufacture implants with specific design features in particular regions. Hence, we can strategically initiate bone growth, facilitate joint movement, reduce weight, provide support and protection etc. By converting computerized tomographic images to 3D printable model, our artificial implants are tailor-made in shape and size conformed to the patient anatomy with designed core structure and outer surface to assist bone ingrowth.

The customizability, permanence, bio-compatibility and bio-conductivity make our 3D-printed metal product an ideal candidate as human bone implant. We constantly collaborate with universities, hospitals, surgeons and industrial partners to develop innovative 3D-printing technologies to meet the emerging needs in orthopedics.

科能三維科技（醫療）有限公司專門定制人造金屬植入物。通過3D打印"個性化足踝骨"的突破，我們在設計和製造方面展現了高效出色的能力。

科能三維的"可控性生物打印技術"可按要求於特定位置直接打印所需效果。因此我們能策略性地控制和導引骨骼生長，保持關節活動能力、減輕植入物重量、提供支撐和保護等。我們通過將患者的斷層圖像轉換為3D打印模型，進而定制出吻合患者骨頭尺寸及形狀的個性化植入物，並通過調控內在結構及表面粗糙度以助固定植入物。

可定制性、永久性和生物兼容性使本公司的三維打印金屬產品成為人類骨骼植入的理想選擇。我們正不斷與大學、醫院和外科醫生合作開發創新的三維打印技術，以滿足醫療的新興需求。

Comments from Judging Panel
評審委員會評語

The application demonstrates the use of disruptive technology in the field of bone implant. It offers a tailor-made and client oriented approach in addressing the health needs of elderly people.

此應用展示了在骨科植入物的領域中，採用突破性創新科技，針對長者的健康需求提供度身訂製及以服務對象為本的方案。

Smart People (Smart Ageing)
Certificate of Merit
智慧市民(智慧樂齡)優異證書

The Hong Kong Society for the Aged
香港耆康老人福利會

e72 website and App
「e72傲齡動力」資訊網及
e72一拍「職」合流動應用程式
www.e72.hk

"e72 website" and "e72" mobile app is the first interactive job searching e-platform dedicated for the middle-aged and above in Hong Kong, which provide one-stop online recruitment platform to assist them to re-enter the workforce in an easier way. Functions of the e-platform include job searching, online application and other interactive functions. Along with the popularity of Smartphone among the middle-aged and above, "e72" mobile app provides an even more user-friendly virtual environment for the target-users.

The e-platform provides user-friendly interface and easy operation for job matching. Users can easily browse the job vacancies and related information dedicated to them. Once they have registered as members, they would be sent directly to the employers through online application for any job vacancy.

Besides, the middle-aged and above were encouraged to be tutors or volunteers, to contribute with their talents. User could share interesting information to different social network platforms to enhance interactive function.

「e72傲齡動力」資訊網及e72一拍「職」合流動應用程式乃全港首個專為中高齡人士而設的電子就業平台，提供一站式就業及配套資訊，包括：職位搜尋、網上就業申請、互動功能等，務求以創新的科技為中高齡人士提供適切的就業服務。

「e72傲齡動力」資訊網設計簡易及操作簡單，迎合中高齡人士所需。中高齡人士只需於網站登記成會員，便可透過網站直接瀏覽及享用即時網上申請工作的功能，方便快捷。

除了瀏覽就業資訊外，平台亦鼓勵中高齡人士成為導師或義工，發揮才能，貢獻社會。中高齡人士更可將活動、課程、職位、義工空缺等資料分享至不同的社交平台，加強平台以外的聯繫及交流。

Comments from Judging Panel
評審委員會評語

The platform offers not only employment opportunities for the middle-aged and the elderly population, but also other supportive services which are relevant to the pursuit of Smart Ageing

此平台不僅為中年人和長者提供就業機會，更提供相關的支援服務，成就智慧樂齡。

Smart People (Smart Inclusion) Gold Award
智慧市民(智慧共融)金獎

The Brightly Project Ltd.

"Know My Students" Suicide Prevention for Secondary Schools — A chatbot that analyses symptoms of mental health, stress, and digital behavior to identify students at-risk of suicide.

「Know My Students」校園防止自殺應用程式 —— 使用聊天機器人來評估壓力、抑鬱徵狀和精神健康以及分析數字行為，來辨識具自殺風險的學生。

www.knowmystudents.com

Suicide is the leading cause of death for youth in Hong Kong.

Every 9.3 days, we lose a youth to this tragedy, where they feel there is no alternative, or help available. And too often, no one knew they were suffering.

The reality is that emotional issues are not easily recognisable, and it is difficult for students to ask for help.

But what if we could detect suicide risk earlier?

What if there was a way for schools to connect with students who are struggling and in need of support? What if this could be done in a friendly and comfortable way for students, and scalable to all schools across Hong Kong?

This is the "Know My Students" digital suicide prevention program.

Led by Dr. Jamie Chiu, we've reimagined clinical-grade psychological tools as a friendly chatbot and applied machine learning analysis to enhance mental health risk prediction. Our chatbot can be deployed to hundreds of students simultaneously, and schools are instantly alerted when a student exhibits suicide risk.

"Know My Students" has already helped many schools in Hong Kong intervene and prevent suicide attempts, and uncover the students who were struggling, yet no one knew about.

自殺是香港青年人第一死因。

平均每9.3日一青年人踏上不歸路。往往，他們內心的掙扎並沒有被身邊的人所發現。

要及時發現學生情緒問題有相當的難度，加上學生向外求助也不普遍，造成了一群漏網之魚。

但如果自殺風險可及早識別呢？如果有方法讓學校與具有情緒困擾的學生建立聯繫呢？試想像這些都以友善、吸引同貼近學生的溝通模式，並可擴展至全港所有學校？

這就是【Know My Students】校園防止自殺應用程式。

由趙博士領導下，我們將臨床心理學評估工具設計為友善的聊天機器人並應用機器學習（machine learning）算法來加強自殺風險預測。我們的聊天機器人可以同時使用於數百名學生。而當學生被發現具有自殺風險時，學校會立即得到警報。

【Know My Students】已幫助香港多所學校及早識別那些漏網之魚學生及防止了多名企圖自殺個案。

Comments from Judging Panel
評審委員會評語

The application provides an assistive tool for frontline social workers, counsellors and teachers in identifying students with emotional problems.

此應用為前線社工、輔導員和教師提供一套輔助工具，以識別受情緒困擾的學生。

Smart People (Smart Inclusion) Silver Award
智慧市民(智慧共融)銀獎

Stanley Ho Big Data Decision Analytics Research Centre, The Chinese University of Hong Kong / Human-Computer Communications Laboratory, Department of Systems Engineering and Engineering Management, The Chinese University of Hong Kong
香港中文大學何鴻燊海量數據決策分析研究中心 / 香港中文大學系統工程與工程管理學系人機通訊實驗室

E-Commu-Book: An Assistive Technology for Users with Speech Impairments
電子溝通書：一種語音障礙用戶的輔助技術

People with speech impairments have difficulty communicating in their everyday lives. Speech therapists have been using the traditional "communication book" to enable their patients communicate more effectively by pointing at graphics. This communication book is laminated and expensive to print. It also has limited extensibility for new vocabulary items. This motivates our development of an electronic communication book (E-Commu-Book), which is freely downloadable from the cloud for cost-effective and efficient distribution. It is also dynamically extensible for personalized content using fluid displays. We leverage automatic machine translation and speech technologies to rapidly prototype multilingual versions of the E-Commu-Book, which facilitates adoption in different countries.

Usage behavior of subscribers are tracked and stored in cloud to inform future design improvements. Our work is well recognized in the international research community through invited keynotes, publications and demonstrations in flagship conferences. The E-Commu-Book improves the quality of life of people with speech impairments

患有言語障礙的人士在日常生活中常會遇到難以與人溝通的情況，言語治療師一般會使用溝通書作輔助患者溝通的工具。用家可以指出書內已分類的圖片及詞彙，表達自己的想法及意思。然而實體溝通書有著重大的限制。溝通書經過過膠處理以增強耐用性，但亦因此花費更長時間打印出版。若使用者想擴充或編輯詞彙清單，他們需要自行打印希望新增的詞彙及圖片，插入溝通書內。為移除上述限制，我們創造了一本電子溝通書 (E-commu-book)，比起傳統的實體書更加完善。

電子溝通書提供個人化內容及彈性版面和佈局。我們的電子溝通書能如實體書一樣顯示圖像，更能融入我們自行研發的粵語文字轉換語音合成技術，生成文字語音。實體溝通書只提供一種語言，而我們利用雲端伺服器的翻譯及文字轉換語音服務，創造出多語言版本的電子溝通書。用戶的使用行為將儲存在雲端，為日後改善設計作參考。電子溝通書在國際研究界中的邀請主題演講、出版刊物及旗艦會議的演示中得到了認同，提高了語言障礙人士的生活質素。

Comments from Judging Panel
評審委員會評語

The application offers a user-friendly and cost effective tool in facilitating and enhancing the learning for patients with speech impairments.

此應用提供了一個易於使用且經濟實惠的有效工具，促進和增強言語障礙人士的學習。

Smart People (Smart Inclusion) Bronze Award
智慧市民(智慧共融)銅獎

Playto (Hong Kong) Ltd.
GlowMaster
www.playto.org

GlowMaster is a highly engaging video game and training course that helps students master focus. GlowMaster employs a brainwave (EEG) sensing headset to continuously monitor the brain's focus levels while onscreen graphics reinforce improvement in focus skills. Students are self-motivated to play the game for its compelling graphics, challenging play mechanics and overall entertainment value. GlowMaster turns the abstract concept of focus into a safe, experiential training ground for learning through play.

The inner workings of the game and its curriculum are complex, yet GlowMaster turns it into a simple learning concept. GlowMaster challenges the mind like no other game as it requires players to improve and increase their attention through each of level of the game.

Parents and teachers report that children who complete the GlowMaster program are able to apply their improved focus skills outside the game and into their everyday lives. In clinical trials, 90% of parents noticed a marked improvement in their child's ability to focus after playing through the game.

GlowMaster empowers students to discover and develop attention skills leading to success in all areas of their lives and transforms how students learn to master the art of focus.

GlowMaster 是令玩家高度投入的電子遊戲和培訓課程，能幫助學生掌握專注力。GlowMaster 通過腦電波傳感器探測腦電波，連續地監測專注程度，利用圖像加強專注力。學生因畫面吸引、富挑戰性的遊戲和總體的娛樂性，而自發地玩這遊戲。GlowMaster 將抽象的專注概念，變成從遊戲學習的體驗性訓練。

遊戲的運作和課程複雜，但GlowMaster 把它轉化成簡單的遊戲概念。沒有其他遊戲像GlowMaster 一樣挑戰玩家的意志，因為每一個階段都要求玩家改善和增強專注力。

家長和老師反饋小孩在完成GlowMaster 後，都能把提升了的專注力應用到遊戲以外的日常生活。臨床試驗中，90%以上的家長發現孩子在玩GlowMaster後，專注力有明顯的改善。

GlowMaster 讓學生體驗和發展專注技巧，令他們在生活各方面都得到成功，改變學生如何掌握專注力的藝術。

Comments from Judging Panel
評審委員會評語

The application combines interesting games with educational training and therapy for ADHD students and the implementation is simple and user-friendly.

此應用將有趣的遊戲與專注力不足及過度活躍症學生的教育訓練和治療相結合，簡單易用。

Smart People (Smart Inclusion)
Certificate of Merit
智慧市民(智慧共融)優異證書

Faculty of Education, The Chinese University of Hong Kong
香港中文大學教育學院

Our hands speak

妙手可言

sites.google.com/site/wingchee/home/our-hands-speak

The use of social robots in educating children with autism represents radical innovations in the application of technology in medicine and education. To date, there are many traditional techniques to improve social competence/communication skills in individuals with ASD (Autism Spectrum Disorders). Human therapists play a significant role but children with autism tend not to show strong interests in humans. Our programs use technology as an alternative and perhaps better means to teach individuals with ASD social competence and communication skills. Technology deliberately creates multiple platforms where children with ASD could learn in a safer environment and with a more pleasant manner. Interacting with technology may not induce sensory overstimulation and distractions in individuals with ASD, thereby lessening their level of anxiety. We have been using four social robots in our programs. These robots are programmed to provide structured and clear information, which is a preferred learning mode for children with ASD.

Our programs are the first in the world to use social robots to train children with ASD gestural communication skills. More than 300 preschool and school-aged children with autism have participated in these programs either at homes or in schools. The effectiveness of the programs is supported by empirical evidence.

社交機械人在教育自閉症兒童方面的應用代表了科技應用的革新。過去有許多傳統技術可以提高自閉症患者的社交能力／溝通技巧。人類治療師在當中扮演著重要的角色，但自閉症兒童往往對人類不感興趣。我們的計劃利用科技作為替代一也許更好一的方法來教育自閉症患者社交能力和溝通技巧，讓自閉症兒童可以在更安全、更愉快的的環境中學習。與科技對象交流不會導致自閉症患者的感官受到過度刺激和分心，從而減輕他們的焦慮水平。我們的計劃使用四個機械人，機械人已被編程以提供結構化和清晰的信息。

我們的課程是世上率先使用社交機械人培訓自閉症兒童手勢的溝通技巧。超過300名學前和學齡自閉症兒童參加了這些計劃。這些計劃的有效性得到了數據的支持。

Comments from Judging Panel
評審委員會評語

The project demonstrates the innovative use of social robots in educating children with autism.

此項目展示了社交機器人在教育自閉症兒童方面的創新應用。

Smart People (Smart Inclusion)
Certificate of Merit
智慧市民(智慧共融)優異證書

LAU Shiu Fung
劉肇豐
Wheelman
www.wheelman.hk

Wheelman empowers all wheelchair users to enjoy lives by providing barrier-free environment. Wheelman is a mobile mapping application which is designed for people with physical constraints. It provides detailed information of accessible facilities in public areas, like shopping malls, including the horizontal entrances, elevators, restrooms, etc whom with special needs, as well as the accessible route path from MTR stations to the malls. The Wheelman team researched 36 malls, 24 karaoke establishments and 50 cinemas over Hong Kong. Wheelman helps not only people with disabilities, but everyone who faces similar situations as well, such as wheelchair users, baby prams users, elderly people and also their families and friends. Wheelman believes people with limitations can also go very far.

Wheelman透過提供無障礙資訊讓所有輪椅使用者都能享受生活。Wheelman是一個專為輪椅使用者而設的無障礙地圖手機應用程式,提供公共場所的無障礙設施資訊,包括水平入口、升降機、無障礙洗手間,以及從港鐵站到商場的最佳路線等資訊。Wheelman團隊在香港調查了36個購物商場、24間卡拉OK場所和50間電影院,從而方便輪椅使用者外出吃喝玩樂。Wheelman不僅能夠幫助殘疾人士,還可以幫助其他面對類似情況的人,如推嬰兒車的父母、長者以及他們的家人和朋友。Wheelman相信有限制的人也可以走得很遠。

Comments from Judging Panel
評審委員會評語

The application encourages persons with disabilities and special needs to better engage in social life and enjoy services and entertainment just as other citizens do.

此應用有助鼓勵殘疾及有特別需要的人士更好地參與社交生活,享受與其他市民一樣的服務和娛樂。

Smart People (Citizens Data Applications) Silver Award
智慧市民（市民數據應用）銀獎

Gogolook Co., Ltd.
走著瞧股份有限公司

HKJunkCall

hkjunkcall.com

The HKJunkCall, developed in 2010, is an open data and big data system that provides caller identity service. The service basically transforms numerous unknown caller IDs into caller identity information.

The HKJunkCall website allows citizens to report phone numbers that are used for important notifications, telemarketing or fraud calls. Besides the website, phone numbers can be reported through Call Defender or other third party apps. After collecting and analyzing the submitted data, the result is shown on the website and then generated into "telemarketing phone number list". The list will then be deployed to the apps as well. Due to this cross-platform system, the result is more sensitive and accurate.

The system is extremely cautious about protecting personal privacy data; therefore, uploading contact book is abandoned. Although the analysis becomes more difficult, it is valuable at the same time. To overcome the difficulty, we self-developed a natural language processing to enhance the accuracy of the result from the analyzing system.

We hope that other telephone systems can adopt our data in the future so our phone no longer shows numbers only, but identifies the caller's information as a result of building a more trustworthy communication network.

HKJunkCall 於2010年啟動，這是開放數據亦是大數據系統。為市民提供陌生來電的來電辨識資訊，把來電號碼轉換成來電者資訊。

HKJunkCall 網站接受市民報告重要電話、推銷電話或詐騙電話資料，市民可透過網站、小熊來電或其他第三方應用程式回報資料。經過分析市民提交的數據，HKJunkcall於網站顯示結果，也產生「推銷電話清單」，發報到各應用程式。由於這是跨平台系統，分析結果相對較敏感和準確。

整個HKJunkCall系統對保障個人私隱資料有極高的關注，絕不上載通訊錄，即使這樣令分析變得困難，但這是有價值及難能可貴的。為彌補這困難，系統使用自家研發的自然語言處理，提升分析結果的準確性。

HKJunkCall提供的數據希望於未來被其他電話系統採納，讓來電不再只顯示號碼，同時顯示來電者資訊，以建立一個更可信任的電話系統。

Comments from Judging Panel
評審委員會評語

The application is an effective tool to address the daily problem of citizens and brings great convenience to people's lives.

此應用有效解決市民日常面對的問題，為人們的生活帶來更大的便利。

Smart People (Citizens Data Applications) Bronze Award
智慧市民 (市民數據應用) 銅獎

The Chinese University of Hong Kong
香港中文大學

TouchAir
點藍天空

TouchAir is an efficient smartphone APP developed by Prof. Huang Bo's team for the general public to access real time air pollutant concentrations at any location in Hong Kong and Mainland China with high accuracy, high resolution and full coverage. This APP overcomes the bottleneck of existing ones that can only provide air quality information at the sparsely distributed environmental monitoring stations by developing a sophisticated artificial intelligence (AI) model. Through the use of cloud computing techniques, the APP manages to integrate multi-source big data that are all freely crawled from the Internet, including satellite imagery, aerosol network (AERONET) data, air quality monitoring station observations and meteorological data. As TouchAir offers a real-time monitoring of air quality, it helps citizens reduce exposure to air pollution in their daily living and traveling and thus make informed choices towards a healthy lifestyle.

點藍天空是由黃波教授團隊開發的一款高效智能的空氣污染物濃度查詢手機APP。該APP可以為普通公眾提供在香港和中國大陸任何地點的高精度、高分辨率和全覆蓋的實時空氣污染物濃度查詢服務。點藍天空以複雜的人工智能模型為技術基礎，克服了空氣質量監測站分布過於稀疏從而無法提供高精度空氣污染物濃度的瓶頸。同時，通過使用雲計算技術，本APP可以整合來自互聯網的多源大數據，包括衛星圖像、氣溶膠網絡（AERONET）數據、空氣質量監測站觀測數據和氣象數據等，為該APP提供數據支持。點藍天空能夠實時監測空氣質量，可以幫助市民減少在日常生活和旅行中的空氣污染暴露度，從而為健康的生活方式做出明智的選擇。

Comments from Judging Panel
評審委員會評語

The application is a good initiative for open source data analytics, promoting the public awareness of air pollution and its negative effects.

此開源數據分析是一個很好的方法，提升公眾對空氣污染及其負面影響的意識。

Introduction of Organiser
主辦機構簡介

社聯
HKCSS

香 港 社 會 服 務 聯 會
The Hong Kong Council of Social Service

The Hong Kong Council of Social Service (HKCSS) works to promote a just and inclusive society by promoting collaborative efforts among NGOs in service planning and development, facilitating cross-sectoral partnership, advocating equality, justice, social integration and a caring community. The Council has now become an umbrella organisation of over 460 Agency Members, that provide over 90% of the social welfare services for those in need through 3,000 service units all over Hong Kong.

For more details, please visit our website at http://www.hkcss.org.hk.

香港社會服務聯會（簡稱「社聯」）是一個代表非政府社會福利服務機構、具清晰信念與專業能力的聯會組織，致力推動本港社會福利的發展。社聯與會員機構共同信守社會的公義、公平，推動社會福利界與商界及其他專業團體的策略伙伴聯繫，共同建立共融及關懷的社會。社聯現時共有超過460個機構會員，它們透過其屬下遍布全港3,000多個服務單位，為本港市民提供超過九成的社會福利服務。

詳情請瀏覽我們的網站：http://www.hkcss.org.hk

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Acknowledgement
鳴謝

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籌辦委員會

Names are listed in alphabetical order by surname 以英文姓氏排序

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Members 成員	Mr. Francis FONG 方保僑先生	The Hong Kong Information Technology Federation 香港資訊科技商會
	Prof. WONG Yu Cheung 黃於唱教授	The Chinese University of Hong Kong 香港中文大學

Panel of Assessors
審核委員會

Smart Ageing 智慧樂齡

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Smart Inclusion 智慧共融

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Citizens Data Applications 市民數據應用

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