

Breaking Innovations and Futuristic Insights Await at the 7th International Conference HIS 2018 in Cairns, Australia



Building Applications that Matter: Co-designing with Adolescents with Autism Spectrum Disorder

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Abstract. Technology-based applications for people with special needs are on the rise as mobile devices and wearable technology become more pervasive in society. However, the development of applications for special needs can be an intricate process due to the physical or mental challenges of the prospective users. Individuals with *Autism Spectrum Disorder* (ASD) process the world differently and often encounter poor *User Experience* (UX) with applications that are not designed with them in mind. Application design approaches should be inclusive and partner with users and communities to increase application acceptance, improve useable features and create enjoyable interfaces; yet this is not current software design practice. A pilot study was conducted to investigate how adolescents with ASD use technology and explore how they could participate as co-designers in the early phases of application development. Two co-design workshops were conducted with six adolescents with ASD over one month where they engaged in the application ideation and design phases of a software design process through the use of group discussion and drawings. This paper presents the results of the pilot study and discusses the role of ASD participants in co-designing software applications for wearable technology and how they felt about their involvement in the process. Key themes were identified by thematic analysis of the data collected. Preliminary data suggest that participants: (1) are technology savvy users; (2) experience poor UX due to their unique perceptiveness; and (3) expect to make design decisions for applications built for them.

Keywords: Co-design · Participatory design · Autism Spectrum Disorder
Human computer interaction · User experience

1 Introduction

Autism Spectrum Disorder (ASD) describes a range of neurodevelopmental disorders characterized by impaired social and communication development, repetitive behaviors and restricted interest [1, 2]. These challenges span the lifetime of those diagnosed, but early intervention for children diagnosed with ASD may result in an improvement in both their social and non-social challenges over time [3]. The current generation of adolescents are first class digital citizens, having had access to computers and technology as a part of their daily lives since early childhood. In addition, many adolescents

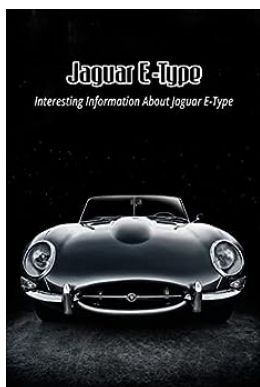
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Calling all tech enthusiasts, industry leaders, and researchers! The 7th International Conference on Health Information Science (HIS) is coming to

Cairns, Australia, in October 2018. This highly anticipated event promises to showcase groundbreaking innovations and present futuristic insights in the realm of health information systems.

Discover Unprecedented Opportunities

HIS 2018 offers an unparalleled platform for participants to explore the latest advancements in health informatics and exchange ideas with prominent experts from around the world. With over 3000 expected attendees, this conference aims to foster collaboration, inspire novel solutions, and drive positive change in the healthcare industry.



Health Information Science: 7th International Conference, HIS 2018, Cairns, QLD, Australia, October 5–7, 2018, Proceedings (Lecture Notes in Computer Science, 11148)

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Key Themes and Topics

The conference will cover a wide range of themes and topics, including:

- Big data analytics in healthcare
- Artificial intelligence and machine learning in healthcare
- Internet of Things (IoT) in healthcare
- Healthcare data privacy and security
- Telemedicine and remote healthcare services
- Health information system interoperability
- E-health applications
- Healthcare data visualization and exploration
- Medical imaging and analysis

Prominent Speakers and Presentations

HIS 2018 boasts an impressive lineup of internationally renowned speakers who will share their expertise and insights during keynote speeches, panel discussions, and paper presentations. Attendees can expect to gain valuable knowledge through these engaging sessions and have the opportunity to network with leading figures in the field.

Interactive Workshops and Demonstrations

Participants will have the chance to attend interactive workshops and demonstrations, where cutting-edge technologies and software solutions will be showcased. This hands-on experience will enable attendees to explore practical applications of health information systems and witness innovations firsthand.

Networking Opportunities

Networking is an essential aspect of any conference, and HIS 2018 recognizes its significance. With dedicated networking breaks and social events, attendees will have ample opportunities to connect with like-minded professionals, share ideas, and establish valuable contacts for future collaborations.

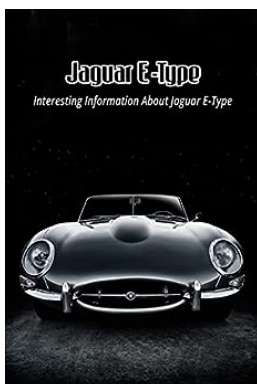
Explore the Beautiful Cairns, Australia

Not only will attendees have the chance to immerse themselves in the latest developments in health informatics, but they will also get to experience the natural beauty of Cairns, Australia. From the breathtaking Great Barrier Reef to the lush rainforests of Daintree National Park, Cairns offers a stunning backdrop for this international conference.

Registration and Important Dates

Registration for HIS 2018 is now open. Early bird discounts are available for those who register before the specified deadline. To ensure your spot at this premier healthcare informatics event, visit the conference website for more information.

Save the date for the 7th International Conference on Health Information Science, held in Cairns, Australia, in October 2018. Prepare to be inspired, empowered, and at the forefront of cutting-edge health informatics!



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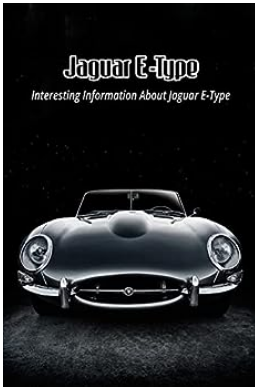
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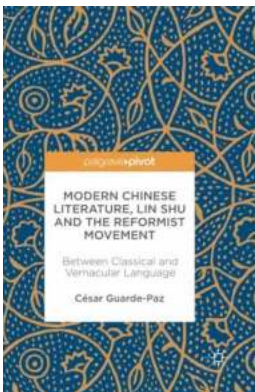
This book constitutes the refereed proceedings of the 7th International Conference on Health Information Science, HIS 2018, held in Cairns, QLD, Australia, in October 2018.

The 13 full papers and 5 short papers presented were carefully reviewed and selected from 43 submissions. The papers feature multidisciplinary research results in health information science and systems that support health information management and health service delivery. They relate to all aspects of the conference scope, such as medical/health/biomedicine information resources such as patient medical records, devices and equipments, software and tools to capture, store, retrieve, process, analyze, and optimize the use of information in the health domain; data management, data mining, and knowledge discovery, management of public health, examination of standards, privacy and security issues; computer visualization and artificial intelligence for computer aided diagnosis; development of new architectures and applications for health information systems.



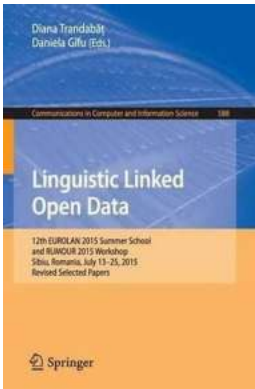
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