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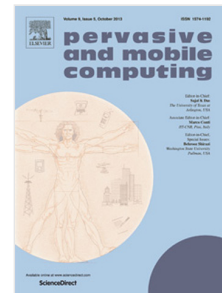
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Remembering through lifelogging: a survey of human memory augmentation

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Abstract

Human memory is unquestionably a vital cognitive ability but one that can often be unreliable. External memory aids such as diaries, photos, alarms and calendars are often employed to assist in remembering important events in our past and future. The recent trend for lifelogging, continuously documenting ones life through wearable sensors and cameras, presents a clear opportunity to augment human memory beyond simple reminders and actually improve its capacity to remember. This article surveys work from the fields of computer science and psychology to understand the potential for such augmentation, the technologies necessary for realising this opportunity and to investigate what the possible benefits and ethical pitfalls of using such technology might be.

Keywords: Lifelogging, Augmented Human Memory, Personal Life Archives

1. Introduction

Human memory is a critical cognitive function that we rely on almost constantly in our everyday lives. External memory aids are often used to help support memory for past events; photographs help us to remember autobiographical events such as holidays, we use recorded minutes to help us remember the content of meetings, and revision notes to remember lectures. Similarly, post-it notes, alarms, and interactive calendars and reminders help us to remember future events. Such aids often require some planning and conscious effort to initiate and record, and provide external support for only a small proportion of all past and future events. Thus we often must rely on our human memory to encode, store, and later retrieve our experiences. Although our minds are often able to recollect information quickly upon request, we know that our memory may fail us, particularly as we age.

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