8 NOVEMBER 2017, HÖRSAL E, HUMANISTHUSET

UMEÅ COGNITIVE SCIENCE INSPIRATIONAL TALKS 2017

13.15 Welcome
Linnea Karlsson Wirebring, Department of Psychology

13.20 The Intelligence explosion revisited
Karim Jebari, Institute for Futures Studies, Stockholm

14.00 The cognitive neuroscience of human aging – brain correlates and early predictors
Sara Pudas, Department of Integrative Medical Biology, Umeå University

14.30 Coffee break

15.00 A Front-End Developer’s Insights from the Cognitive Science Program
Joakim Bergqvist, Jo Kommunikation, Umeå

15.30 Cognitive Engineering for Situated Human-Computer Interaction — or: the Benefits and Pitfalls of Interdisciplinary Research
Kai-Florian Richter, Department of Computer Science, Umeå University
The Intelligence explosion revisited
An existential catastrophe is a hypothetical future event that destroys Earth-originating intelligent life. Researchers have argued that super intelligent machines constitute a major existential risk. This claim was recently defended in Nick Bostrom’s book “Superintelligence”, and forms the basis of a research sub-discipline referred to as “AI risk”. While AI risk research has been found on the fringes of academia, a number of prominent academic institutions have recently begun to pursue research in this field. It is therefore important to critically assess the argument that AI could be an existential risk, and if so, the character of that risk. We here distinguish between intelligence or cognitive capacity of an individual and techne, a more general ability to solve problems with for example technological artifacts. We also discuss how we should think about agency in this context.

The cognitive neuroscience of human aging – brain correlates and early predictors
There are large differences between individuals in how well their cognitive abilities are maintained in old age. Some preserve youth-like performance while others eventually develop cognitive decline or dementia. This talk will present research on the neural bases of these individual differences, that is, how brains of older individuals with maintained and declining cognitive abilities differ. Another emerging topic in aging research will also be addressed, namely the influence of early life factors on our cognitive fate in aging. Research findings showing that childhood school grades may predict the risk of dementia in old age will be presented and discussed.
A Front-End Developer’s Insights from the Cognitive Science Program

After graduating from the Bachelor’s Program in Cognitive Science in 2011, I had the opportunity to try my hand at building websites. I felt I had the capability to do this and set out to start a company with my friend Edvin From. Today this company is a successful communications agency with eight employees. In this talk I will share my experiences from this journey and talk about my most valuable insights gained when studying at Umeå University.

Cognitive Engineering for Situated Human-Computer Interaction — or: the Benefits and Pitfalls of Interdisciplinary Research

Spatial cognitive engineering exploits scientific understanding of the way people conceptualize, perceive and communicate about space in order to design computational systems that support spatial tasks and spatial decision making. It is the spatial extension of Norman’s concept of cognitive engineering — a kind of applied cognitive science, exploiting knowledge and experience from the cognitive sciences to the design of machines. Using recent student projects as examples, in this presentation I will explore some of my research in this domain, highlighting the interdisciplinary nature of such research, and pointing out some of the pitfalls as well.

Kai-Florian Richter’s work is highly interdisciplinary, set in the interface of Computer Science, Spatial Cognition, and Geographic Information Science. He researches issues of human-computer interaction in spatial contexts, predominantly wayfinding and spatial communication. Kai-Florian received a PhD in Computer Science from the University of Bremen, Germany, where he worked in an interdisciplinary Spatial Cognition research center. Before joining Umeå University as an Associate Professor, he was a Postdoc at the School of Information Sciences, University of Pittsburgh, and a Lecturer at the Department of Infrastructure Engineering, University of Melbourne, Australia, and at the Department of Geography, University of Zurich, Switzerland.
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