

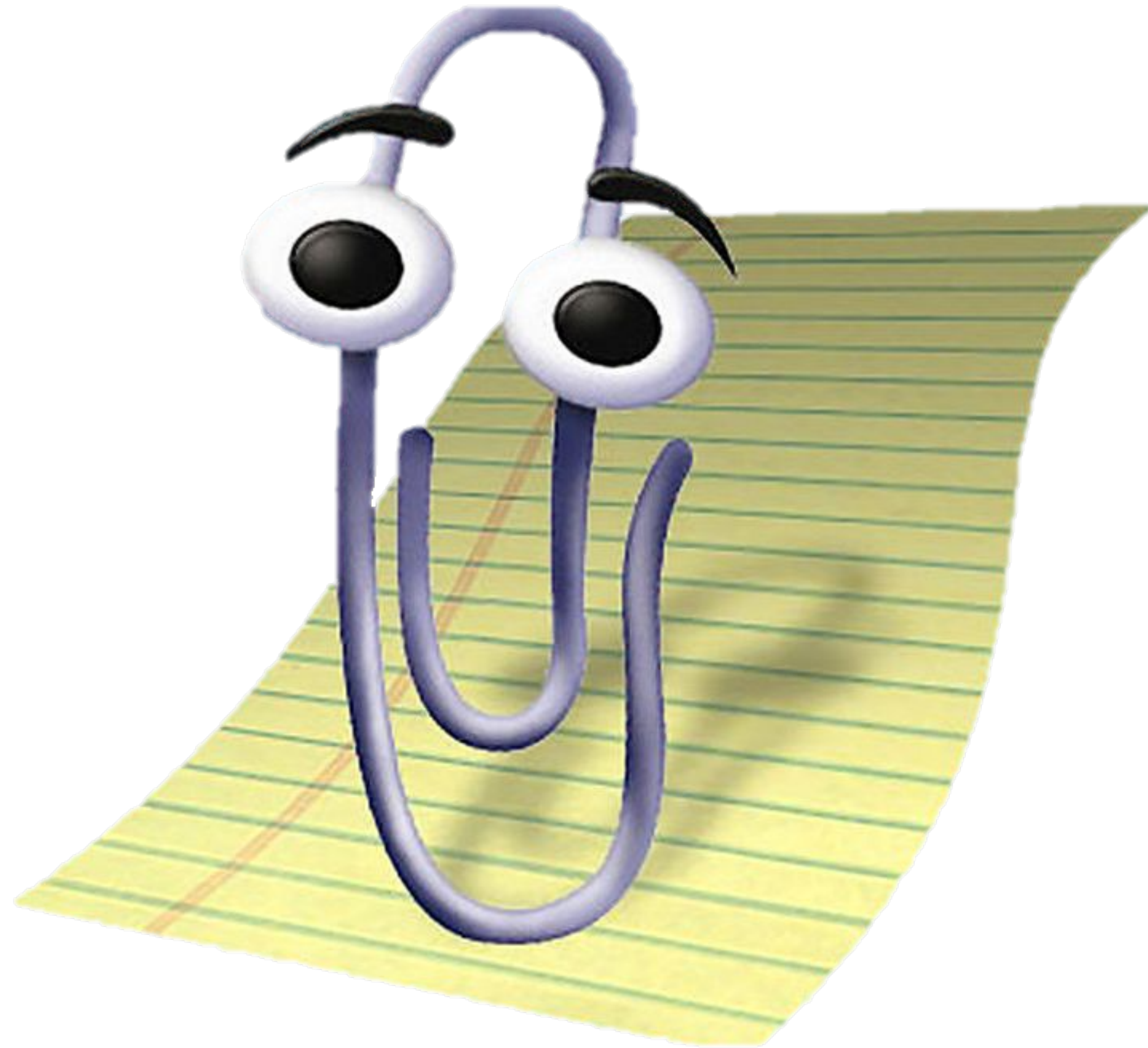
Human-Centered Computing

An essential skillset of an elite computing workforce

Jason Wiese

Assistant Professor

School of Computing



If your software solves the wrong problem...

- You waste development

- Applying Human-centered Computing
- thinking can prevent this

alternatives



**So...what is Human-Centered
Computing (HCC) anyway?**

LOG IN

E-mail adress

Password

LOGIN ME

SIGN UP

FORGOT PASSWORD?



LOG IN

E-mail adress

Password

LOGIN ME

SIGN UP

Forgot Password?

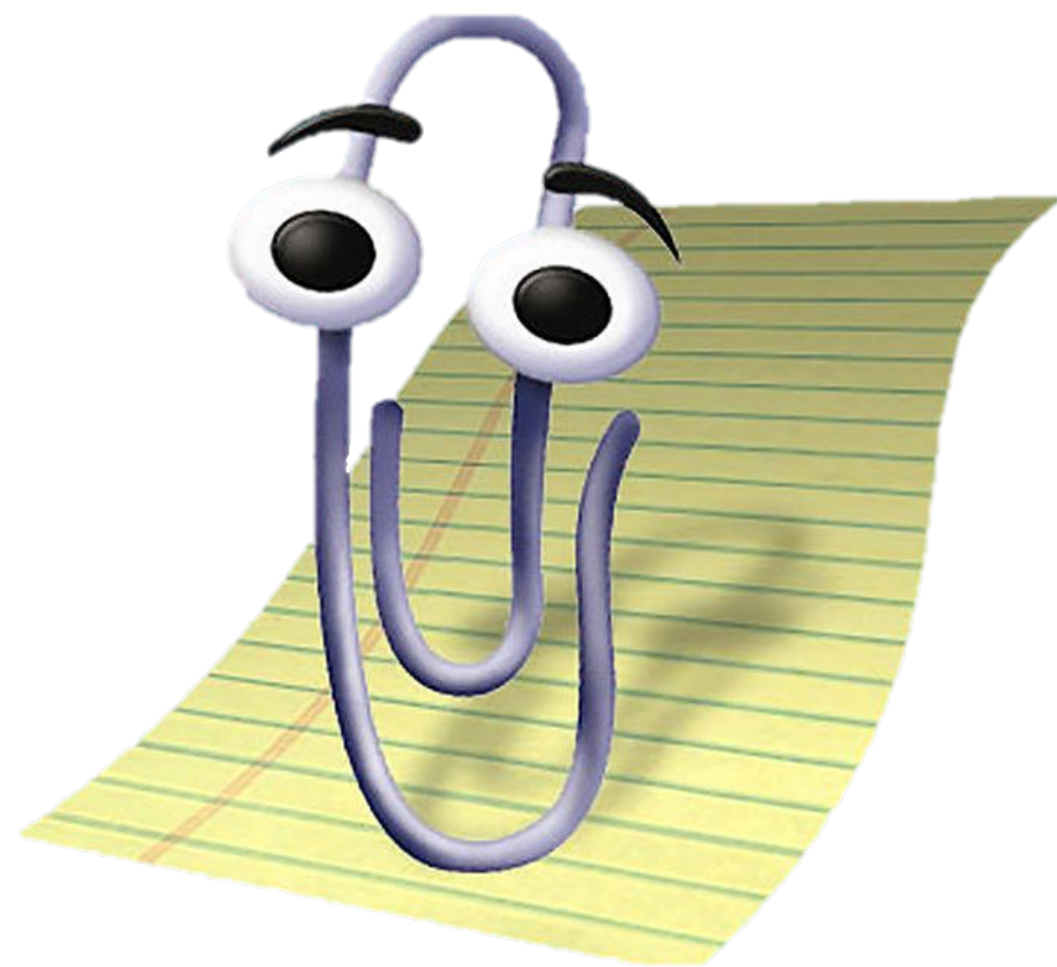


A spectrum of HCC

Who are the users?
What are their needs?
What problems might we solve?

What possible solutions are there?
What are the implications of these designs for *all* of the users?
What are the design and implementation trade-offs?

What should we change to make our design usable and aesthetically pleasing?



HCC is a perspective

...and a set of methods to go with it

**making technology means making
assumptions about how it will be used**

**I know what
they need**



**Exposure to a broad HCC
perspective is rare for CS students**

An employee with CS knowledge and an HCC perspective is valuable

- make the difference between a successful or failed product
- engaged with the big picture and likely a more effective communicator
- Will understand that implementation tradeoffs can impact the end user

HCC courses offered in the SoC



Designing human-centered experiences

Ethics in data science

Social computing

Human aspects of cybersecurity

Computer science education

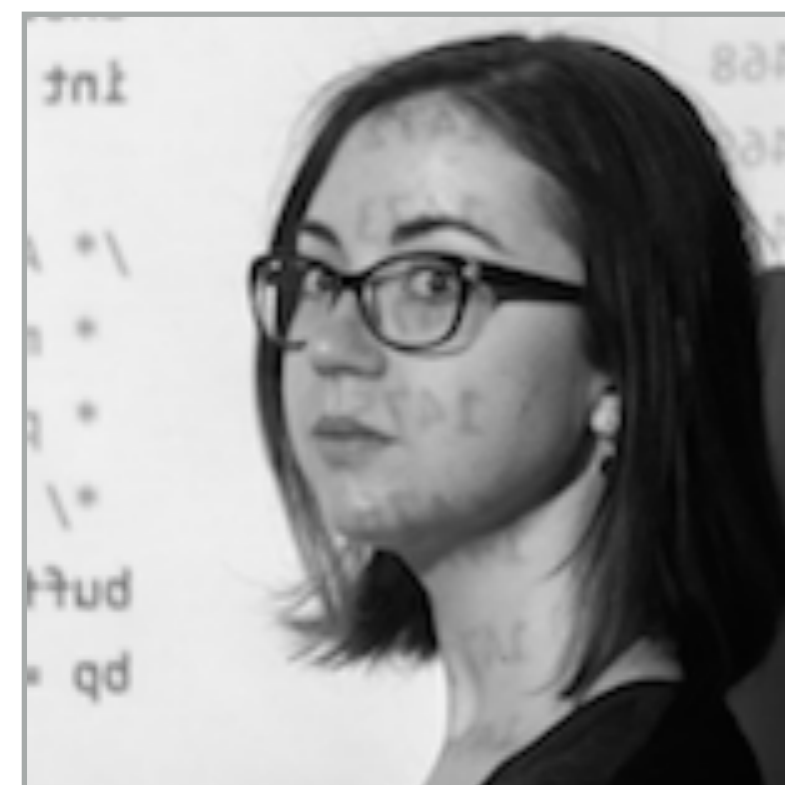
Personal informatics

Grad human-computer interaction methods

Multidisciplinary perspectives of HCI

Visualization for data science

Virtual reality



HCC opportunities in the SoC

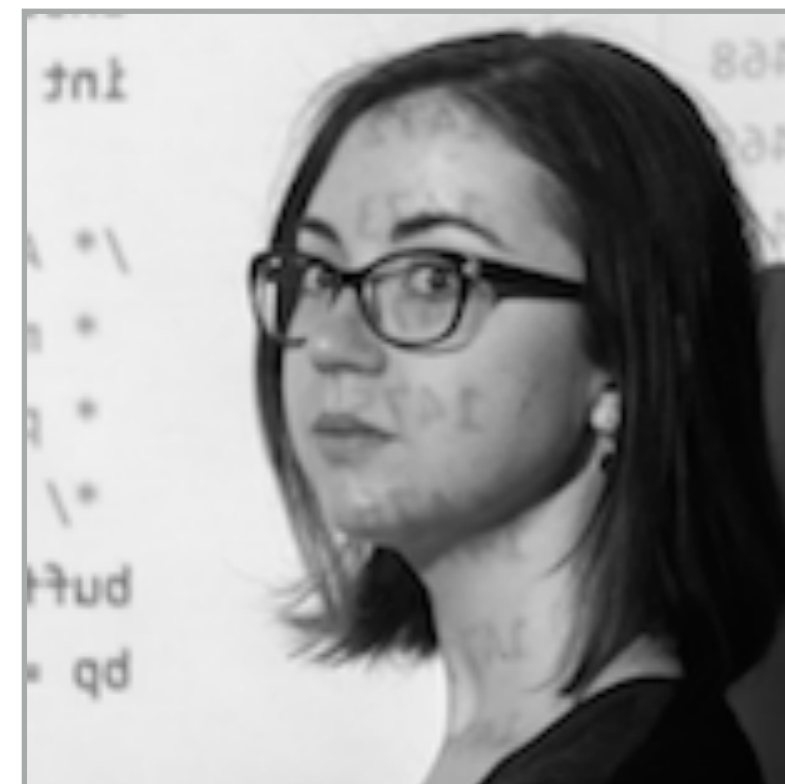


Undergrads participating in HCC research

- See HCC methods being applied
- Contribute to making something that will really be used (e.g. deployed to users)



Graduate students can complete a Computing MS or PhD in HCC, an opportunity available at only a handful of institutions



Next steps for HCC in the School of Computing

- Spreading an HCC perspective throughout the curriculum
 - Integrate more deeply in the capstone sequence
- BS in Software Development will require HCC courses
- Seeking opportunities to engage industry partners who have or desire an HCC perspective
- Leveraging interdisciplinary perspectives across campus
 - Give students experience listening to and working with people who have deep domain expertise