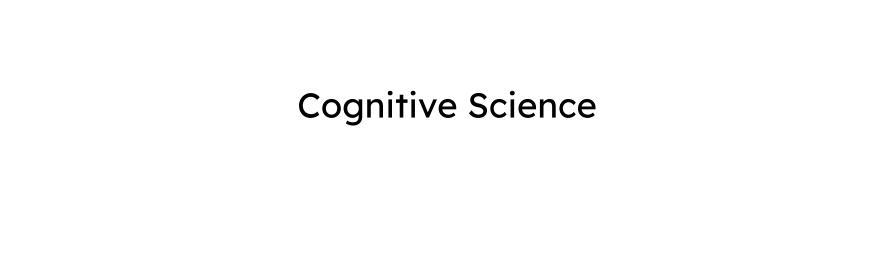
Connected Brains and Distributed Cognition

How We're Creating The Autonomous Future

Sam Ramji sam@ramji.org Cognitive Science B.S. '94

amazing time to be alive



Applied Cognitive Science

dystopian future

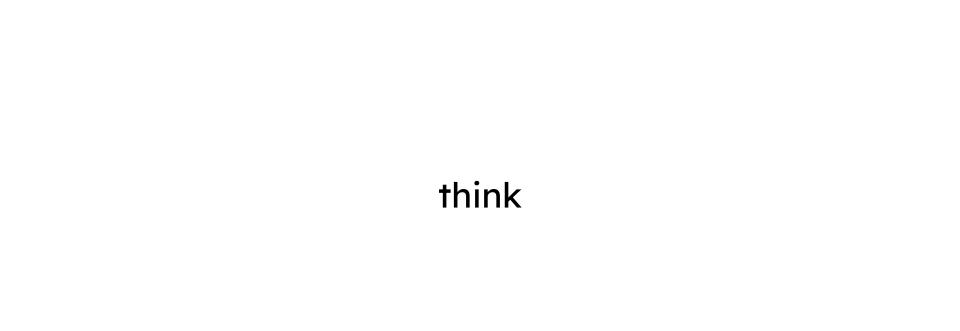
humans *and* autonomous systems

creativity and joy

to predict the future is to create it."

Alan Kay

"The best way



think

why think

why think

what

why

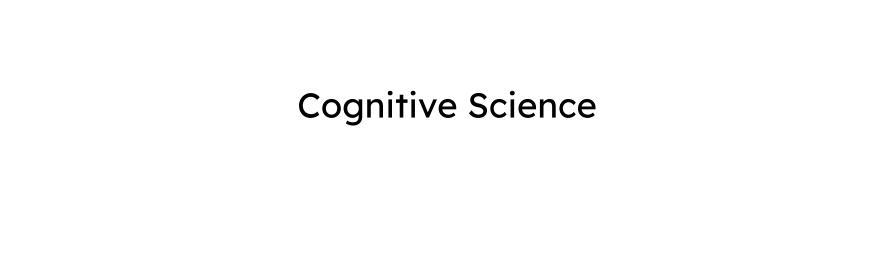
what

think

why

what

know



Marta Kutas

Don Norman

Pat Churchland

Ed Hutchins

David Zipser

Gilles Fauconnier

David Kirsh

Jaime Pineda

understanding thinking

make the world smarter by

fascinated by thinking inspiration

committed to elevating others value

drive hard on the path ability

Applied Cognitive Science





distributed systems

[diagram of n-tier architecture]

cognition

internet gateways to expert systems

internet gateways to expert systems

systems of systems

distributed architecture

internet *companies*

distributed architecture

photo banking travel app app app

database transaction object processor storage

output output output

hidden layer

input input input

systems of systems

Marta Kutas

Don Norman

Pat Churchland

Ed Hutchins

David Zipser

Gilles Fauconnier

David Kirsh

Jaime Pineda

distributed cognition

Open Source

system of people

system of people

systems of code

system of people

systems of code

systems of systems

fascinated by thinking inspiration

committed to elevating others value

drive hard on the path ability

Connecting brains is

the most powerful thing we can do.

Connecting brains is

non-trivial.

Humans have an operating system!

Listening

Listening

...9

Safety

Listening

Safety

Play

Learning Organization

system of people

systems of code

systems of systems

systems of systems
systems of code
system of people

system of people

system of people

systems of code

systems of systems

systems of systems systems of code system of people

system of people systems of code

systems of systems

this is a platform

Google

distributed cognition

autonomous companies

understand how the whole thing works

Meta Twitter

Amazon

Uber Google

first-generation

autonomous companies

focusing on the task and not the human

awful lot of harm to an awful lot of people

next-generation

autonomous companies

humans *and* autonomous systems

creativity and joy

are we creating work that gives people

a chance to be joyful?

are we creating experiences that elevate

the user without harming them as a whole?

Let's use our hearts and our brains to

build a future we want to live in.