Warum wir mehr rückwärts lernen müssen.

KWB & Phoenix Contact – Digitalisierung:
Gemeinsam durch Bildung den Fortschritt gestalten!

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Stanford ENGINEERING
Computer Science

Heute:

1. Meine Lerngeschichte als Ingenieur
2. d.school: Design-Prozess = rückwärts lernen
3. Ausblick: Wie es rückwärts besser klappen kann?

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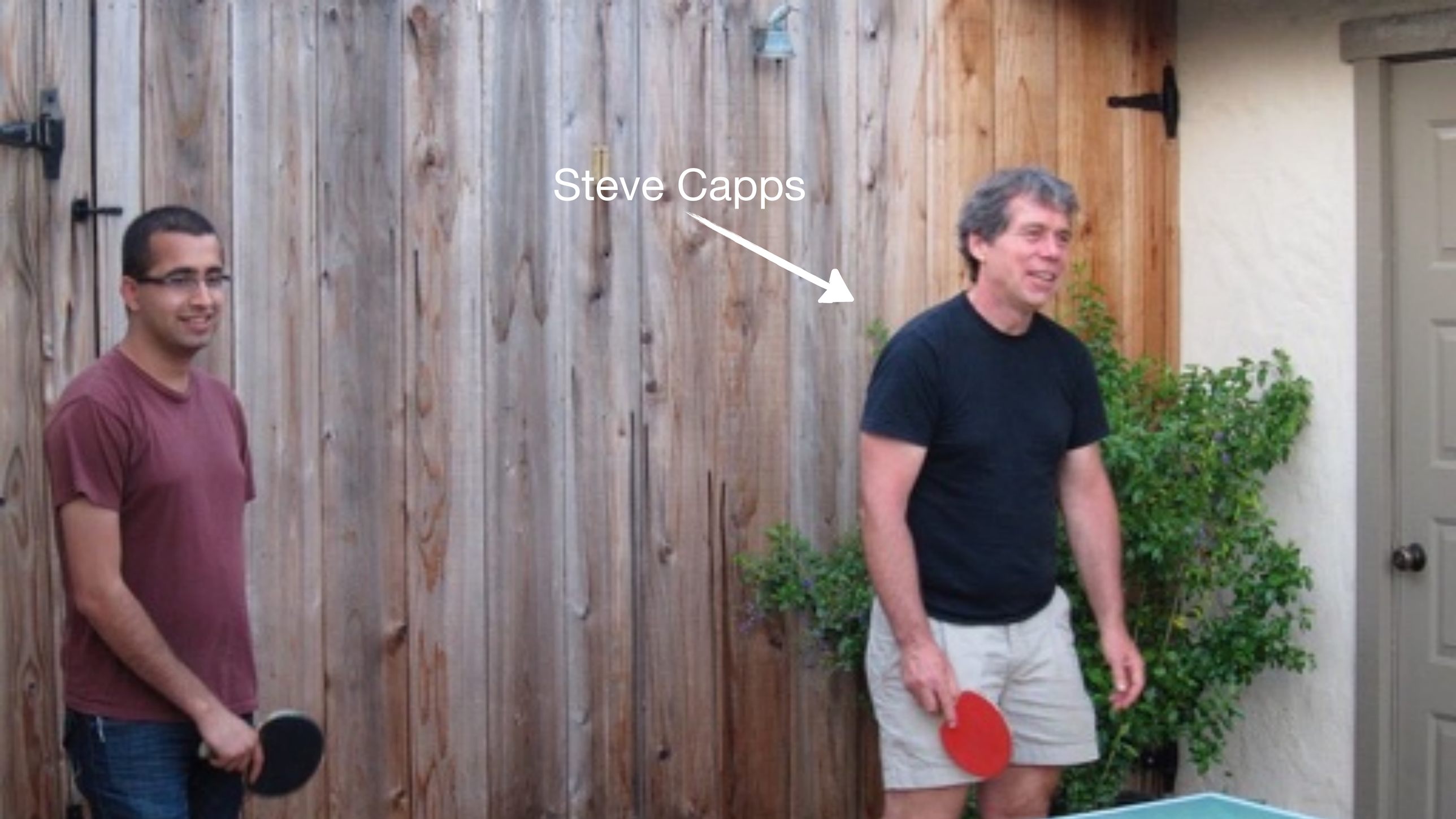
Zuerst:
eine kurze Geschichte

Wie ich als 16-Jähriger für Steuerhinterziehung angezeigt wurde…


Steve Capps

PayNearMe Mobile

A mobile cash payments system for the underbanked allows the 33% of the U.S. without a credit or debit card to pay with cash for online purchases, bills, and more, and even send money home.

“Life's a lot more fun when you aren't responsible for your actions”

Lektionen

- Im Internet weiß niemand wie alt Sie sind.
- In der digitalen Welt kann ein 18-jähriger “Industrie-Veteran” genannt werden (absurd).
- Handwerkszeug und die Geschwindigkeit mit der man es sich aneignet macht den Unterschied (nicht Hintergrundwissen).

Der Stanford Ansatz

Soziologie

Entrepreneurship

Geschichte

Maschinenbau

Ich studiere ~~Informatik~~

Philosophie

Spanisch

Verhaltensbiologie

Produktdesign

Der klassische Weg

Kritisches Denken
Mathematik
Physik
Programmierung in C
Objekte & Klassen
etc.

Aus dem Blauen:
Wofür interessierst Du Dich?

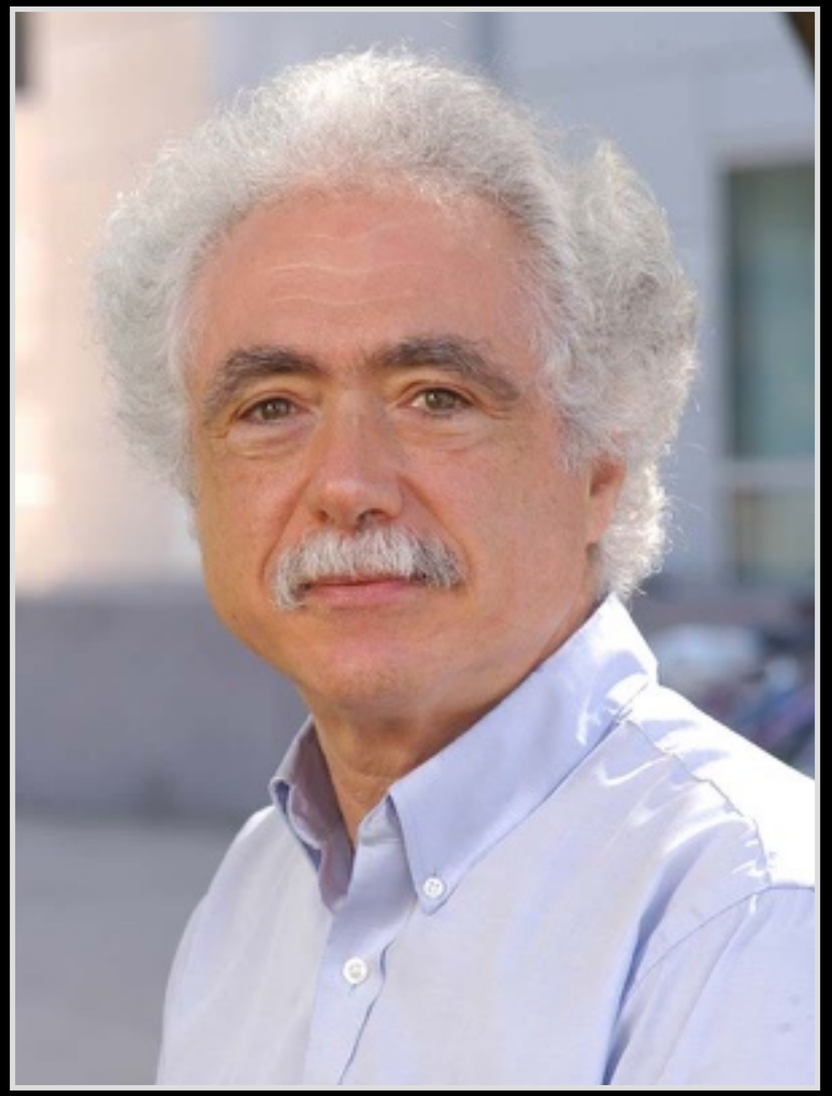
Hardware / Software
Künstliche Intelligenz
Algorithmen
etc.

Schnellere, elegantere, bessere Technologie

Lösung auf der Suche nach einem Problem

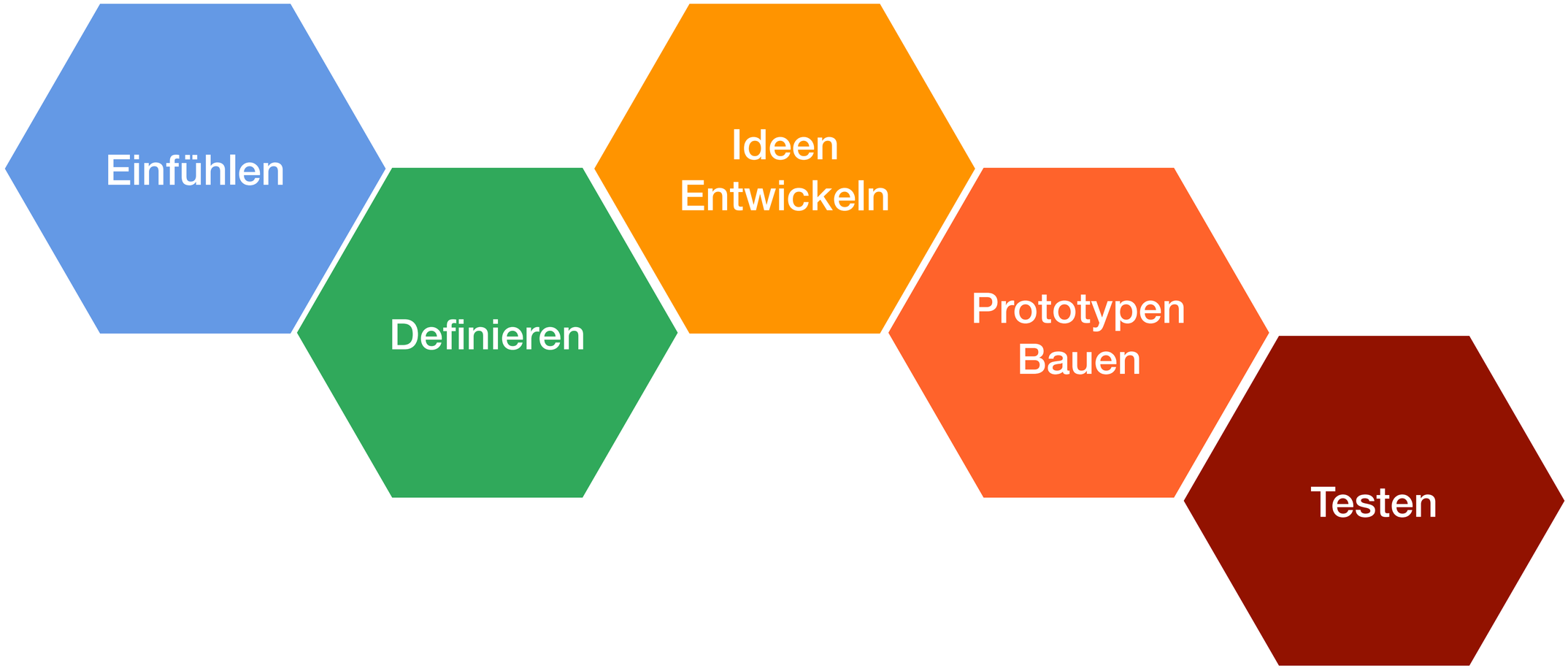
Der klassische Weg

Vorlesungen und Kurse geben mir **Handwerkszeug** um die Welt zu **verändern.**

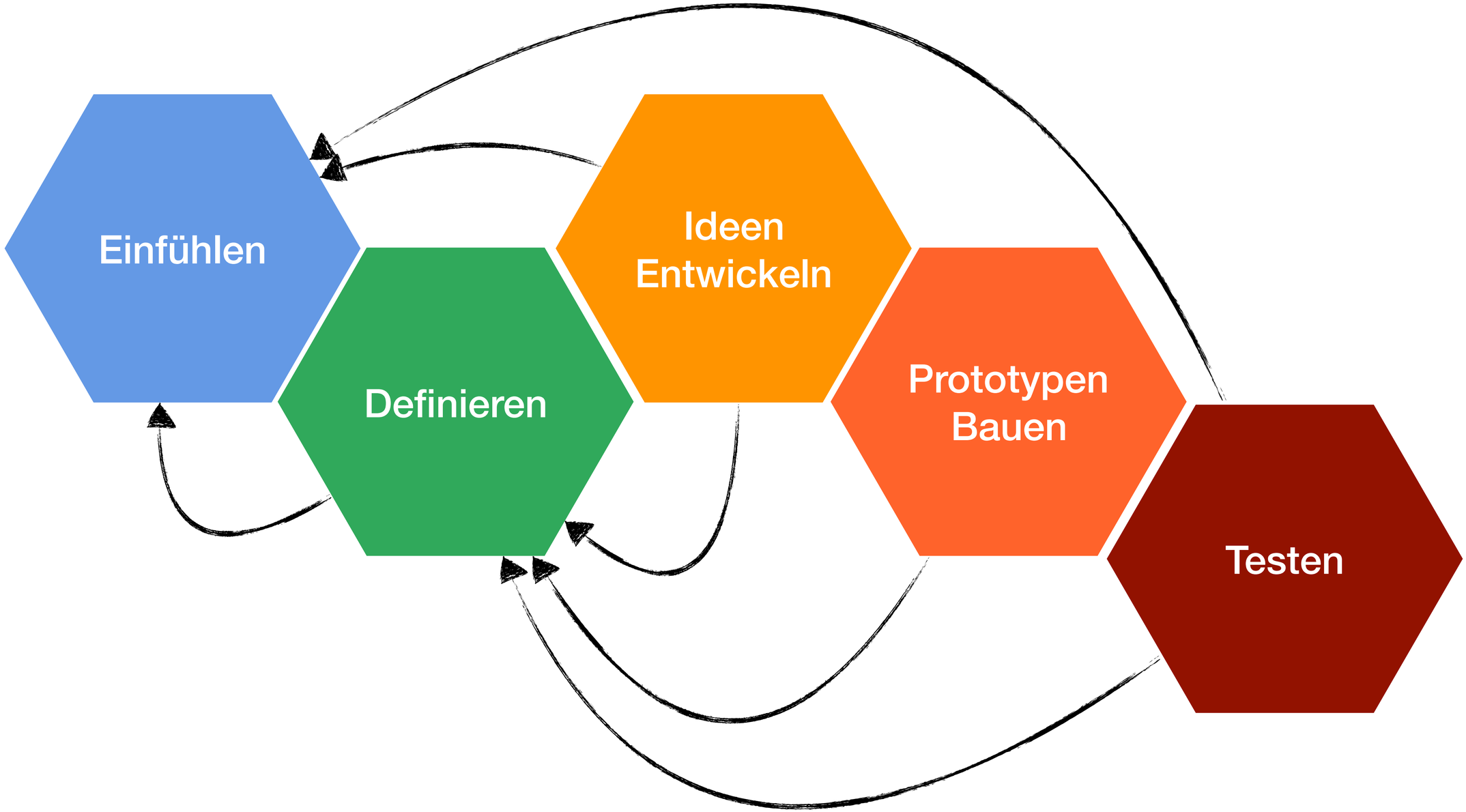


Terry Winograd

“Filling the **H** in **HCI** (Human Computer Interaction)”



dschool.stanford.edu



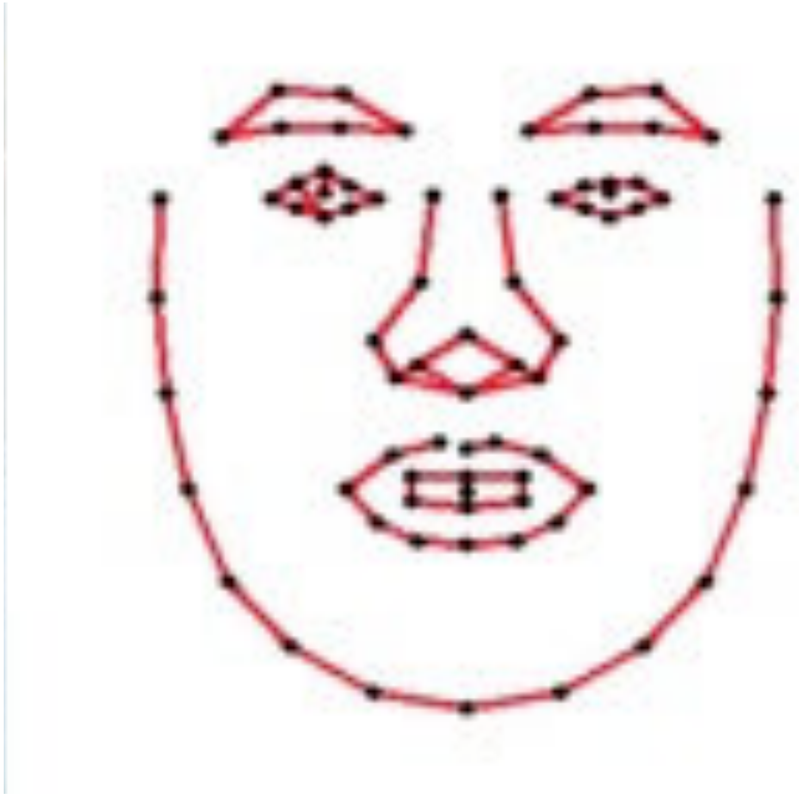
dschool.stanford.edu

Mein Beispiel… Sension

Sension Engagement Tracker

A face and eye tracking system to measure student engagement, Sension's API turns any camera into a sensor for visual engagement that can be used to understand what content students find most engaging or boring. This is used to analyze engagement, improve courses, and proctor exams by Mindflash and Pearson.

Die nötige Technologie?



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https://explorecourses.stanford.edu/search?view=catalog&filter-coursestatus-Active=on&page=0&catalog=&academicYear=&q=Digital+Image...

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Digital Image Processing EE go

Browse by subject...

Schedule view...

1 - 3 of 3 results for: Digital Image Processing EE

printer friendly page

EE 168: Introduction to Digital Image Processing

Computer processing of digital 2-D and 3-D data, combining theoretical material with implementation of computer algorithms. Topics: properties of digital images, design of display systems and algorithms, time and frequency representations, filters, image formation and enhancement, imaging systems, perspective, morphing, and animation applications. Instructional computer lab exercises implement practical algorithms. Final project consists of computer animations incorporating techniques learned in class. Prerequisite: Matlab programming.

Terms: Win | Units: 3-4 | Grading: Letter or Credit/No Credit

Instructors: Zebker, H. (PI)

Schedule for EE 168

EE 368: Digital Image Processing (CS 232)

Image sampling and quantization color, point operations, segmentation, morphological image processing, linear image filtering and correlation, image transforms, eigenimages, multiresolution image processing, noise reduction and restoration, feature extraction and recognition tasks, image registration. Emphasis is on the general principles of image processing. Students learn to apply material by implementing and investigating image processing algorithms in Matlab and optionally on Android mobile devices. Term project. Recommended: EE261, EE278.

Terms: Win | Units: 3 | Grading: Letter (ABCD/NP)

Instructors: Girod, B. (PI)

Schedule for EE 368

PSYCH 221: Image Systems Engineering

Filter Results:

term offered

- Autumn
- Winter
- Spring
- Summer

number of units

time offered

days

UG Requirements (GERs)

component

career

Aber geht es wirklich ohne Grundlagen?

Natürlich nicht.

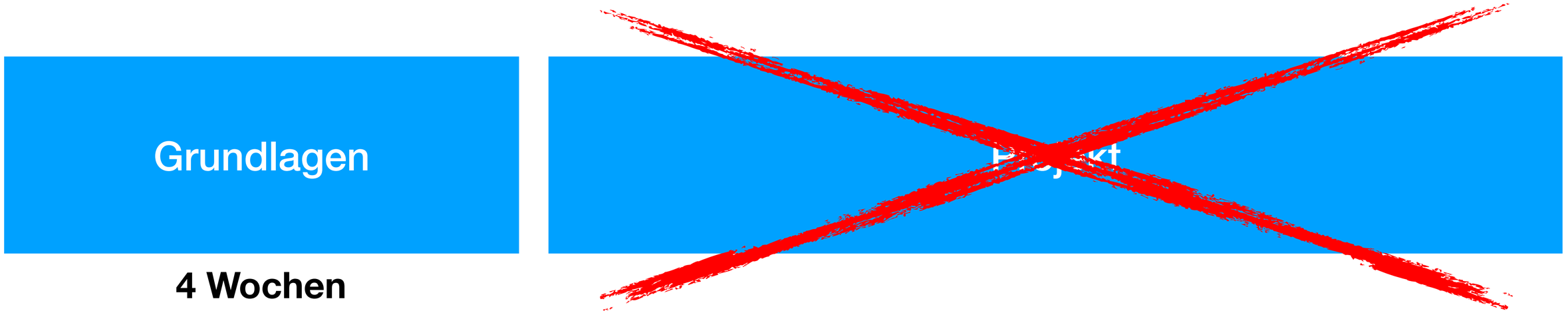
Kursbeispiel

ME 203: Design and Manufacturing

Schweißen	Oberflächentechnik
Drehen	Schmiede
Fräsen	3D Druck
Holzverarbeitung	Lasercutter

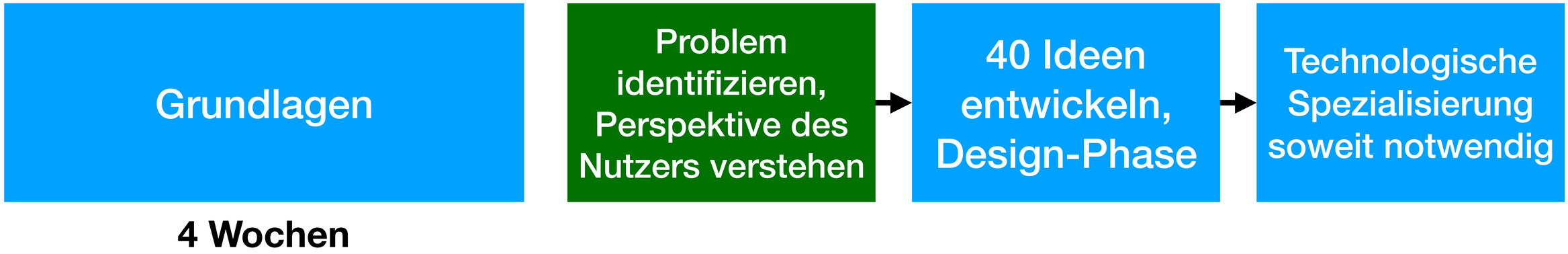
Kursbeispiel

ME 203: Design and Manufacturing



4 Wochen

Kursbeispiel
ME 203: Design and Manufacturing



4 Wochen







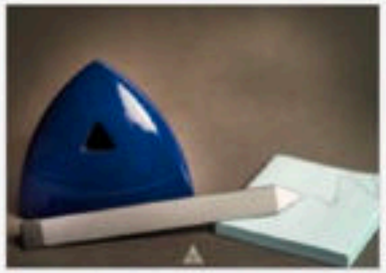










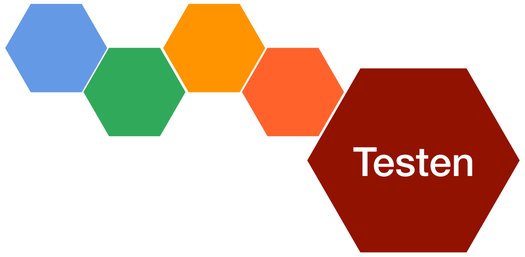




productrealization.stanford.edu/showcase

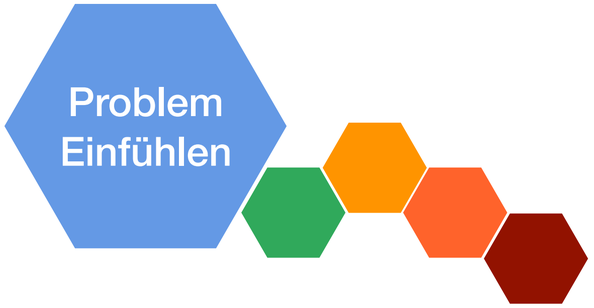
GAIA System Solutions Inc.

A sleepy driver alert system in a $50 box that attaches to the windshield of any car and uses infrared face tracking to measure driver fatigue by analyzing the driver’s eye gaze and blink pattern.

Und jetzt?



autismglass.stanford.edu



dukaconnect.com

DukaConnect.com

Und Sie?

Ausblick…

Zwei gute Nachrichten

1. Informatik ist keine Naturwissenschaft
2. Maschinenbau können wir in Deutschland viel besser als in Stanford

… aber in der Software-Welt

…macht Handwerkszeug und die Geschwindigkeit
mit der man es sich aneignet den Unterschied
(nicht Hintergrundwissen).

…und das geht rückwärts schneller!

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