Educating designers in the context of innovation and entrepreneurship

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What if: Sophia as a designer?
Designers: AI Are Coming For Your Jobs

2016 double 11 period, Luban, according to the theme and consumer characteristics of personalized presentation, the production of a material of 170 million orders of magnitude, put in the form of advertising in the form of thousands of stations in the face of thousands of thousands of people in the 11.

The 27 day of the Ali group UCAN2017 designer of the year meeting, Ali officially disclosed artificial intelligence design system of "Luban", the last 11 double production of smart brain 170 million design material, the design industry impact will be hitherto unknown.

Luban：famous Ancient skilled Chinese craftsmen
Design thinking involves observation to discover unmet needs within the context and constraints of a particular situation. It frames the opportunity and scope of innovation, generating creative ideas, testing and refining solutions. It creates a repeatable and scalable process for innovation.

**Design Thinking** designs products this way...

**Empathize**
Learn about audience for whom you are designing. Who is my user? What matters to this person?

**Define**
Create POV based on user needs and insights. What are their needs?

**Ideate**
Brainstorm as many creative solutions as possible. Wild ideas encouraged!

**Prototype**
Model one or more of your ideas to show to others. How can I show my idea? Remember: A prototype is just a rough draft.

**Test**
Share prototype for feedback. What worked? What didn’t?

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**Machine Learning**

Machine learning is a method of data analysis that automates analytical model building. Using algorithms that iteratively learn from data, machine learning allows computers to find hidden insights without being explicitly programmed where to look.

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Source: John Morley & Associates
Identify problems and opportunities

Designing and Planning

Making

Prototype implementation

Self-learning

Team working

Expression and presentation

Leadership

Define

Generate

Explore

Fabricate
There Are Three Kinds of Design At Play. We Need To Be Specific.

DESIGN
“classical design”
there’s a right way to make what is perfect, crafted, and complete

BUSINESS
“design thinking”
because execution has outpaced innovation, and experience matters

TECHNOLOGY
“computational design”
designing for billions of people and in realtime, is at scale and TBD

Driver/ the Industrial Revolution, and prior to that at least a few millennia of ferment.

Driver/ the need to innovate in relation to individual customer needs requires empathy.

Driver/ the impact of Moore’s Law, mobile computing, and the latest tech paradigms.

The two growing categories of “designers” are those coming from Business and Technology. The three categories above are co-dependent — you must embrace at least two of these categories in order to win in this century.

Source: @kpcb DesignInTech @johnmaeda
Anidraw-

AniDraw: When Music and Dance Meet Harmoniously
—AAAI2017
Previous studies such as the study performed by Katerina F., Sergey L., etc. (2017) extracted motion features from videos. However, since these motion features were based on 2D spaces, biological observations suggest that humans can recognize actions from just the motion of a few light displays attached to the human body (Johansson 1973). Existing datasets mainly including SBU Kinect interaction dataset (Yun et al. 2012) contains 230 sequences of 8 classes totally 6614 frames, HDM05 dataset (Muller et al. 2007) contains 2.337 skeleton sequences totally 184046 frames, and CMU dataset (CMU 2003) contains 2235 sequences totally 987341 frames and is the largest skeleton based human action dataset so far. But there are only 64300 frames for pure dance motions in CMU data sets. And these dance motions are discontinuous but also have no accompaniment to match themselves.
1. Input 输入音乐旋律
   - 音频数据

2. Feature extraction 特征提取
   - Acoustic features
   - Temporal indexes

3. Relation modeling 动作间的关联性分析与合成
   - Acoustic features
   - Temporal indexes
   - Motion features
   - Input layers → Multi-cell layers → Output layers

4. Transition Motion Generation 动作平滑
   - Motion features

5. Output 动画生成
   - 舞蹈动作

高精度的动画训练与生成方式
World Creativity and Innovation Day - 21st April

Acknowledging that innovation is essential for harnessing the economic potential of each nation and the importance of supporting mass entrepreneurship, creativity and innovation, which create new momentum for economic growth and job creation and expand opportunities for all, including women and youth,
mass innovation and entrepreneurship
The World Design Organization (WDO)TM, formerly the International Council of Societies of Industrial Design (Icsid), is an international non-governmental organization founded in 1957 to promote the profession of industrial design.

Industrial Design is a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life through innovative products, systems, services, and experiences. Industrial Design bridges the gap between what is and what’s possible. It is a trans-disciplinary profession that harnesses creativity to resolve problems and co-create solutions with the intent of making a product, system, service, experience or a business, better. At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities. It links innovation, technology, research, business, and customers to provide new value and competitive advantage across economic, social, and environmental spheres.
2009: Information art and design, Interdisciplinary Design Program
2012: Worldlab in UW — Now: GIX

World Lab Summer Institute Exhibition
Beijing

Come join us to see what the students created in the World Lab Summer Institute, the first of a series of World Lab events. Food and drink is on us. It is a great chance to meet top multicultural students in computer science, informatics, design, and digital arts who have an interest in changing the planet together. This select group of students includes the designers, developers and engineers of a better future.

Friday, September 14th
15:00 - 18:00
Academy of Art and Design
Tsinghua University

Please RSVP to
landay@worldlab.cs.washington.edu
worldlab.cs.washington.edu

Developing Leaders in Innovation
GIX pioneers new forms of teaching and learning by connecting world-class learners and faculty with research-led companies and non-profits to collaborate on solutions to global challenges.

A New Model for Higher Education
Collaboration Across Boundaries
Drive Solutions for Global Challenges
2013: Designnow—Maker Movement—Design Partner

Design Now | 设计力创新
Idea means nothing unless we make it real!
U.S.-China Social and Cultural Dialogue

Media Note
Office of the Spokesperson
Washington, DC
September 29, 2017

U.S. Secretary of State Rex Tillerson and Chinese Vice Premier Liu Yandong co-chaired the first U.S.-China Social and Cultural Dialogue (SCD) September 28, 2017, in Washington, D.C. President Donald Trump and President Xi Jinping launched the SCD in April 2017, at Mar-a-Lago. With a focus on seven cooperative areas – education, social development, science and technology, health, subnational, arts and culture, and environment and conservation – the SCD aims to advance our social and cultural relations consistent with the results-oriented approach of the new Comprehensive Dialogue Mechanism.

The new SCD opens doors for our two countries to continue engaging in positive and open conversation on issues and policies that affect the citizens of both our nations, including on topics such as environment and conservation, health security, and science and technology. For decades, exchanges between the United States and China – including on social and cultural issues – have been effective at building understanding, breaking down barriers to a more constructive relationship, and connecting our peoples. As our two peoples connect, they deepen their understanding and trust of each other in ways that can strengthen our partnerships. The SCD showcases how our peoples can live together for the next 50 years and build a shared future. Together, we can nurture greater connections between our scholars, scientists, students, journalists, and non-governmental leaders for the benefit of our two countries and the world.
Cooperative Area One: Education

The United States and China both recognize that by encouraging our respective students to study in each other’s countries, promoting exchanges between our respective scholars, and facilitating networks between our academic institutions, we promote mutual understanding and expand people-to-people ties, the foundation for stronger relations. Facilitating opportunities for Chinese and American students, scholars, and academic institutions brings our two countries closer.

The United States and China plan to partner to promote educational opportunities in the United States for Chinese students, and opportunities in China for American students. China welcomes the U.S. Embassy’s “EducationUSA” public diplomacy programming.

The Fulbright Program is the United States’ oldest international educational exchange. Working with China, the United States is committed to ensuring that the U.S.-China Fulbright Program continues to increase mutual understanding between the American and Chinese people. The United States and China announced the signing of the Memorandum of Understanding on the U.S.-China Teachers of Critical Languages Program. Both sides commit to jointly carry out activities including conferences for students, scholars, and alumni, including those from the Fulbright Program. China committed to establish a “Short Term Scholarships for Outstanding Students” program, in which the Chinese government plans to provide 10,000 credit scholarships to U.S. students in the next four years.

China committed to work with the private sector and plans to set up a number of U.S.-China Young Makers Exchange Centers in both countries, and to host the U.S.-China Young Makers Competition each year.

Through the U.S. Department of Education and the Chinese Ministry of Education, the United States and China intend to cooperate to enhance Career, Technical, and Vocational Education in both the United States and China.
2015: Living lab - Mass innovation

Identification and Co-conception  Implementation  Experimentation  Evaluation
2016: Technology Innovation and Entrepreneurship

Implementation
Tech-engineering Knowledge and skills

Design
Identify and solve important problems

Leadership
Market opportunities and customer needs

Smart Devices
Computer science Academy of Arts and Design (AAD)

Robotics
Automation, Mechanical engineering, AAD

Smart Transportation
Industrial engineering, Civil engineering, AUTOMOTIVE ENGINEERING

core curriculum
Industry Frontier Design Thinking Startup Guidance
2012~2017: Tsinghua Summer Innovation Program

Tsinghua-Santander

World Challenges

of 21st Century Program
2017: Future City Innovation Connector
New platform:
Creative City Network / The World Design Capital……
Design Week / World Creativity and Innovation Day ……
Innovation Lab / Incubator ……
Impact Hub/ Living Lab / ……
Co-Working Space
Maker Space/ Fab Lab / ……

New education model:
The Minerva Project / Alt school / ……
Stanford d.school / IDeATe at CMU / ……
• Innovation has become a combination of design, technical realization, social and business value, and corporate ecology.
• University should dedicate to cultivate students’ imagination, flexibility, cross-cultural communication skills.
• emphasis more on practical capability and leadership training which can help the team to bring ideas into reality.
• explore the new model to connect the universities and industries.
• It is necessary to integrate innovation and entrepreneurship into the design education system.
Thanks!

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