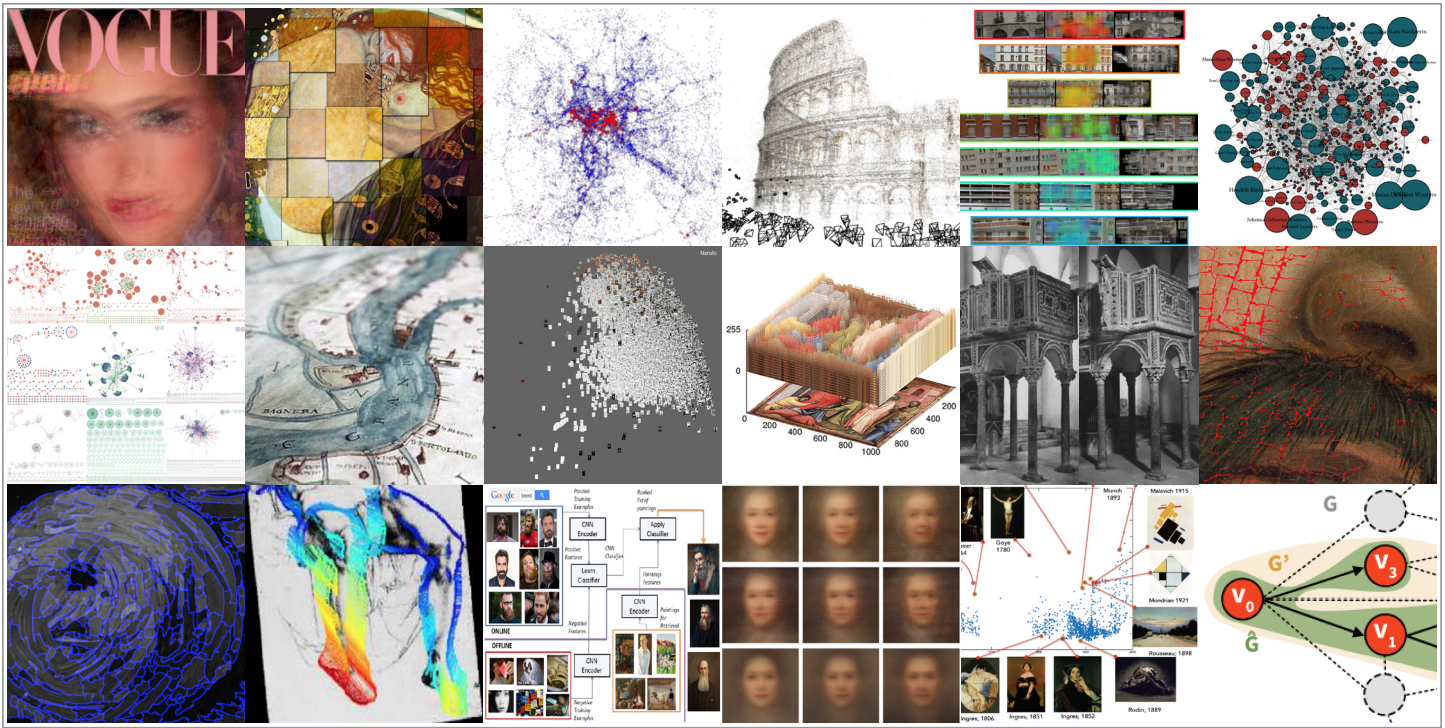
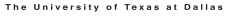


superfinal

HUAS6312.001.16F



General information

The course meets in the *Fall 2016, Thursday, 4:00pm-6:40pm* in room *JO 3.532*

Course materials are available at <https://utdallas.box.com/v/F16-HUAS6312-download>

Coursebook see <http://go.utdallas.edu/huas6312.001.16f>

Instructor contact

Address: 800 West Campbell Rd., AT10 - 75080 Richardson/TX - USA - Office/Lab: ATC3.502

Phone: +1-972-883-4334 - Web: <http://www.utdallas.edu/atec/schich/> - Email: maximilian.schich@utdallas.edu

Email note: The email subject line prefix "[HUAS6312]" is required in all communication with the instructor!

Office hours: Please meet me right after class or make an appointment via email.

Mission

In the **Data-Driven Art History** course, we will explore and review data-driven practices in art history, providing critical insight into new forms of understanding of art and culture. Throughout the course, we will cover relevant work, both past and ongoing, within the discipline of art history and beyond, including areas such as computer vision, culture analytics, culturomics, museum informatics, and socio-physics. We will focus on examples covering the process of art history in its entirety, from “traditional” art and architecture to Instagram. The goal of the course is to provide students with actionable insights for their own research, regarding a field that is exciting, at times controversial, and impossible to ignore. Typical assignments include catching up on landmark projects and introducing them for discussion in class. Students will also design a brief project strategy that will allow them to embed data-driven practice into their own work, both using and extending their own skill-set and by engaging in co-authorship with relevant partners.

The ***Data-Driven Art History*** course feeds into a critical anthology that aims to summarize advanced approaches to understand the process of art and cultural history, while taking into account preceding approaches that remain uncited in current literature.

Grading policy

Percentages: Attendance & Participation 45% + Assignments 45% + Presentation 10%

Grading scale: A = 100 - 90 B = 89 - 80 C = 79 - 70 D = 69 - 60 F = 59 - 0

Course calendar

Aug 25	Session 01	i00	Course introduction / Topic assignment
Sep 1	Session 02	t01	Robots Reading Vogue
		t02	Think with Google (carefully)
Sep 8	Session 03	t03	Mapping the world's photos
		t04	Building Rome in Day
Sep 15	Session 04	t05	Discovering Architectural Style
		t06	Mapping Networks in Sources
Sep 22	Session 05	t07	Mapping Networks of Networks
		t08	Venice Time Machine
Sep 29	Session 06	t09	Comparing a Million Images
		t10	Color Frequency in Paintings
Oct 6	Session 07	t11	Eliminating Near-duplicates
		t12	Restoring an Altarpiece
Oct 12			Preliminary lookbook due (by midnight)
Oct 13	Session 08	t13	Identifying Artists
		t14	Characterizing Alterations
Oct 20	Session 09	t15	Deep Learning Objects
		t16	Quantifying Facial Beauty
Oct 27	Session 10	t17	Quantifying Creativity
		t18	Do Visual Memes Evolve?
Nov 3	Session 11	p01	Project proposal presentations (part 1)
Nov 10	Session 12	grp	Group work ("common lookbook" editing)
Nov 17			Final project proposals due (two hours before class)
Nov 17	Session 13	p02	Project proposal presentations (part 2)
Nov 24			Thanksgiving week (no class)
Dec 1	Session 14	p03	Project proposal presentations (part 3)
Dec 7			Final lookbook due (by midnight)
Dec 22			Final grades go online

Assignments

a1/a2 - Topic Presentations

Introduce your topic in a 30 minute talk and discuss it with the audience on the date specified in the class calendar.

Use a PDF or PPTX file format. A slide template is available via <http://goo.gl/tKQUAX>

Strictly follow this slide filename format: **t##-NetID####-talk.pdf**, where t## is the topic number, and NetID#### is your NetID.

Upload your slides to <https://utdallas.box.com/v/F16-HUAS6312-upload> no later than 1 hour before the respective class session.

a3/a4 - Topic Lookbooks

Create a six-page scholarly lookbook covering your topic. Research takes time. So please start now!

Strictly follow the provided template, including (A) a 500 word summary and a cover figure with caption on page one, (B) about 18 figures with captions laid out on pages 2+3+4 telling an interesting visual story, (C) five key references, plus optional cited literature on page five, and (D) a figure source list on page six. A lookbook template is available via <http://goo.gl/tKQUAX>

For the final lookbook PDF, strictly follow this filename format: **t##-NetID####-lookbook.pdf**

In addition, create a ZIP file containing all your figure image files strictly following this format: **t##-NetID####-figures.zip**

Within the ZIP file individual image files must follow the format: **t##-NetID####-fig##.jpg** (with the figure number corresponding to the lookbook).

Upload the PDF and ZIP to <https://utdallas.box.com/v/F16-HUAS6312-upload> before the midterm and final deadline as given in the class calendar.

a5 - Project Proposal

Create a two page project proposal. As above, thinking and research takes time. So please start now!

Strictly follow the provided template, including (A) a project title, a 500 word summary, and a cover figure with caption on page one, and (B) a list of five key references as well as a figure source on page two. For a maximum five-minute presentation in class, produce a slide-deck using our template. The project proposal template and the slide template are available via <http://goo.gl/tKQUAX>

For the final project proposal slides, strictly follow this filename format: **t##-NetID####-project-talk.pdf**

For the final project proposal PDF, strictly follow this filename format: **t##-NetID####-project.pdf**

Upload the PDF and ZIP to <https://utdallas.box.com/v/F16-HUAS6312-upload> before the final deadline as given in the class calendar.

Selected references

Material for this course is not yet available in a canonical textbook. Instead we start from key references, going on to explore and discuss pertinent material, both explicitly related and beyond the cognitive limit of explicit citation.

- i00 *Figuring out Art History* Schich, Maximilian. **Figuring Out Art History**. arXiv preprint arXiv:1512.03301 (2015).
<http://arxiv.org/pdf/1512.03301>
- t01 *Robots Reading Vogue* King, Lindsay, and Peter Leonard. **Robots Reading Vogue**. dh.library.yale.edu, 2011-2016.
<http://dh.library.yale.edu/projects/vogue/> (accessed August 24, 2016). [project website]
- t02 *Think with Google (carefully)* Pechenick, Eitan Adam, Christopher M. Danforth, and Peter Sheridan Dodds. **Characterizing the Google Books corpus: Strong limits to inferences of socio-cultural and linguistic evolution**. PloS one 10, no. 10 (2015): e0137041.
<http://dx.doi.org/10.1371/journal.pone.0137041>
Viégas, Fernanda, and Martin Wattenberg. **The Art of Reproduction**. hint.fm, 2011.
<http://hint.fm/projects/reproduction/> (accessed August 24, 2016). [project website]
Yarden Horwitz, and Zimmer, Olivier. **Fashion Trends for Spring 2015 as Told by Google Data**. Think with Google, March 2015.
<https://www.thinkwithgoogle.com/articles/spring-2015-fashion-trends-google-data.html> (Accessed August, 2016)
- t03 *Mapping the world's photos* Crandall, David J., Lars Backstrom, Daniel Huttenlocher, and Jon Kleinberg. **Mapping the world's photos**. In Proceedings of the 18th international conference on World wide web, pp. 761-770. ACM, 2009.
<http://dx.doi.org/10.1145/1526709.1526812>
Fischer, Eric. "Locals and Tourists." mapbox.com.
<https://www.mapbox.com/labs/twitter-gnip/locals/> (accessed August 24, 2016). [project website]
- t04 *Building Rome in a Day* Agarwal, Sameer, Noah Snaveley, Ian Simon, Steven M. Seitz, and Richard Szeliski. **Building rome in a day**. In 2009 IEEE 12th international conference on computer vision, pp. 72-79. IEEE, 2009.
<http://dx.doi.org/10.1109/ICCV.2009.5459148>
- t05 *Spotting Architectural Style* Lee, Stefan, Nicolas Maisonneuve, David Crandall, Alexei A. Efros, and Josef Sivic. **Linking past to present: Discovering style in two centuries of architecture**. In IEEE International Conference on Computational Photography. 2015.
<http://dx.doi.org/10.1109/ICCPHOT.2015.7168368>
- t06 *Mapping Networks in Sources* Koenraad Brosens et al. **Mapping the Antwerp Brussels Oudenarde tapestry complex via social network analysis 1600-1700**. KU Leuven, 2015-2016.
<http://maptap.be/> (accessed August 24, 2016). [project website]
- t07 *Mapping Networks of Networks* Schich, Maximilian. **Revealing Matrices**. In: Steele, Julie, and Noah Iliinsky. "Beautiful visualization: looking at data through the eyes of experts." pp. 227-254 O'Reilly Media, Inc., 2010.
<http://archiv.ub.uni-heidelberg.de/artdok/1154>
- t08 *Venice Time Machine* Kaplan, Frederi et al. **Venice Time Machine**. vtm.epfl.ch 2012-2016
<http://vtm.epfl.ch/> & <https://ec.europa.eu/futurium/en/content/venice-time-machine-flagship>
- t09 *Comparing a Million Images* Manovich, Lev. **How to compare one million images?**. In Understanding digital humanities, pp. 249-278. Palgrave Macmillan UK, 2012.
http://dx.doi.org/10.1057/9780230371934_14
- t10 *Color Frequency in Paintings* Kim, Daniel, Seung-Woo Son, and Hawoong Jeong. **Large-scale quantitative analysis of painting arts**. Scientific reports 4 (2014): 7370.
<http://dx.doi.org/10.1038/srep07370>
- t11 *Eliminating Near-duplicates* Resig, John. **Using computer vision to increase the research potential of photo archives**. Journal of Digital Humanities 3 (2013): 3-2.
<http://journalofdigitalhumanities.org/wp-content/uploads/2014/07/Using-Computer-Vision-to-Increase-the-Rese-John-Resig.pdf>
- t12 *Restoring an Altarpiece* Ružić, Tijana, Bruno Cornelis, Ljiljana Platiša, Aleksandra Pižurica, Ann Dooms, Wilfried Philips, Maximiliaan Martens, Marc De Mey, and Ingrid Daubechies. **Virtual restoration of the Ghent Altarpiece using crack detection and inpainting**. In International Conference on Advanced Concepts for Intelligent Vision Systems, pp. 417-428. Springer Berlin Heidelberg, 2011.
http://dx.doi.org/10.1007/978-3-642-23687-7_38
- t13 *Identifying Artists* Johnson, C. Richard, Ella Hendriks, Igor J. Berezchnoy, Eugene Brevdo, Shannon M. Hughes, Ingrid Daubechies, Jia Li, Eric Postma, and James Z. Wang. **Image processing for artist identification**. IEEE Signal Processing Magazine 25, no. 4 (2008): 37-48.
<http://dx.doi.org/10.1109/MSP.2008.923513>
- t14 *Characterizing Alterations* Monroy, Antonio, Peter Bell, and Björn Ommer. **Morphological analysis for investigating artistic images**. Image and Vision Computing 32, no. 6 (2014): 414-423.
<http://dx.doi.org/10.1016/j.imavis.2014.04.004>
- t15 *Deep Learning Objects* Crowley, Elliot J., and Andrew Zisserman. **In search of art**. In Workshop at the European Conference on Computer Vision, pp. 54-70. Springer International Publishing, 2014.
<https://www.robots.ox.ac.uk/~vgg/publications/2014/Crowley14a/crowley14a.pdf>
- t16 *Quantifying Facial Beauty* De La Rosa, Javier, and Juan-Luis Suárez. **A quantitative approach to beauty. Perceived attractiveness of human faces in world painting**. International Journal for Digital Art History 1 (2015).
<http://dx.doi.org/10.11588/dah.2015.1.21640>
- t17 *Quantifying Creativity* Elgammal, Ahmed, and Babak Saleh. **Quantifying Creativity in Art Networks**. arXiv preprint arXiv:1506.00711 (2015).
<http://arxiv.org/abs/1506.00711>
- t18 *Do Visual Memes Evolve?* Cheng, Justin, Lada Adamic, P. Alex Dow, Jon Michael Kleinberg, and Jure Leskovec. **Can cascades be predicted?**. In Proceedings of the 23rd international conference on World wide web, pp. 925-936. ACM, 2014.
<http://dx.doi.org/10.1145/2566486.2567997>

Instructor bio

Dr. Maximilian Schich is an associate professor in Arts & Technology at the University of Texas at Dallas and a founding member of the Edith O'Donnell Institute of Art History. He works to converge hermeneutics, information visualization, computer science, and physics to understand art, history, and culture. He is the first author of "A Network Framework of Cultural History" (Science Magazine, 2014) and a lead co-author of the animation "Charting Culture" (Nature video, 2014). Schich is also an editorial advisor at Leonardo Journal, an editorial board member at Palgrave Communications (NPG), Advances in Complex Systems (ACS), and the Journal for Digital Art History. He publishes in multiple disciplines and is a prolific speaker, translating his ideas to diverse audiences across academia and industry. His work received global press coverage in 28 languages. For more info see www.schich.info.

Recent publications

1. Maximilian Schich: **The Hermeneutic Hypercycle**. *Edge.org* (31 Dec 2015)
<https://edge.org/response-detail/26784> *a brief comment (fresh from the frying pan)*
2. Maximilian Schich: **Figuring out Art History**. *arXiv:1512.03301* (22 Oct 2015)
<http://arxiv.org/abs/1512.03301> *an invited perspective paper (to appear in the Int. Journal for Digital Art History)*
3. Maximilian Schich, Chaoming Song, Yong-Yeol Ahn, Alexander Mirsky, Mauro Martino, Albert-László Barabási, Dirk Helbing: **A Network Framework of Cultural History**. *Science* 345,6196 (2014) 558-562.
(free access via <http://www.cultsci.net/>) *a peer-reviewed research paper*
4. Maximilian Schich and Mauro Martino: **Charting Culture**. *Nature video* (31 Aug 2014)
<https://youtu.be/4gIhRkCcD4U> *a computer animation*

Course & instructor policies (aka the fine print)

Class policies

- **All announcements will be sent via email.** Students are responsible for reading each announcement in detail.
- All students will participate in the discussion. Observers are expected to participate in the discussion equally.
- Students need to read all the assigned readings or complete homework prior to the class discussion.
Homework assignments need to be submitted by the specified deadline (no exceptions!).
The nature of an assignment including deliverables will be defined together, announced in class, or sent out as an email announcement.
- Students have the **responsibility of backing up all their data, code, and preliminary work**. When writing code, it is highly encouraged to use a version control system, such as github, bitbucket, etc.
- Storage (regardless of the procedure): Maintain a **digital library of examples** (painting, sculpture, music, literature, computer art, interactive works, etc.) to be shared in class. Strictly adhere to academic and intellectual property procedures when quoting a work, or when presenting it as an example. Do not present the same work in two different classes.
- Please contact the instructor if you have a disability that requires some arrangements so that appropriate arrangements can be made.
- Participants must sign the attendance sheet at the begin of every session. Showing up late without excuse via email before class will be counted as non-attendance.
- The descriptions and timelines contained in this syllabus are *subject to change* at the discretion of the instructor.

UT Dallas Syllabus Policies and Procedures

- The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.
- The principles of academic honesty and ethics will be enforced. **You should credit all your sources.** Plagiarism (see UTD syllabus policies for definition) in final presentations, papers, or posters will not be tolerated.
- Excessive unexcused non-attendance (see UTD syllabus policies for definition) will lower your grade.