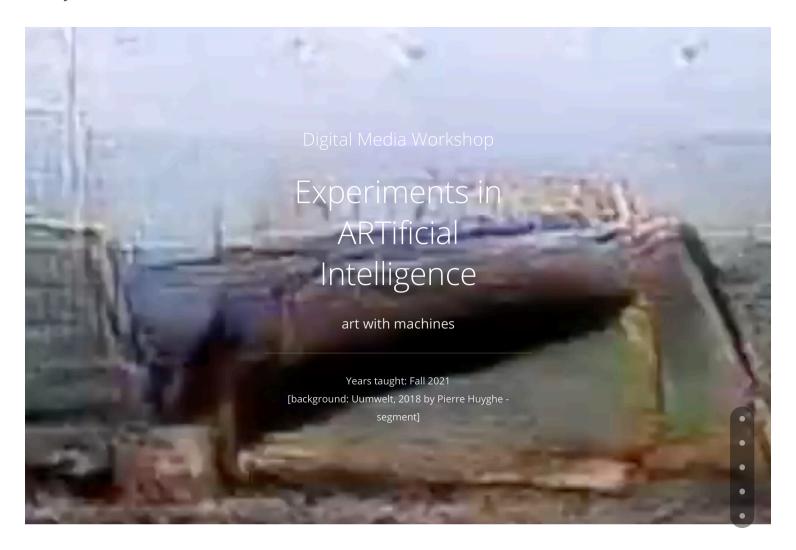


ART 4612C/6925C Digital Media Workshop [cross listed with ART4828C] is a revolving topics, studio workshop. This semester we will explore ARTificial Intelligence. We will learn about the history and theory of AI in computing from a scientific, mythological, and material viewpoint. We will investigate it from a "pharmakological" position that is deeply critical, yet simultaneously analytical with regard to its potential. Not only will we gain a literate understanding of AI, but we will learn "heuretically": we will learn through the act of making. Students will materially engage AI as a medium for the production of art works. Experience with digital image practices, computer modeling and programming are recommended, but not required.

The class is a hands-on, art studio, experimental workshop. It is project-based and students will propose work that explores their own practice using artificial intelligence as a medium or source of inspiration. Sample project ideas include but are not limited to: simulations, networked experiences, generative audio, generative imagery (still and motion), info-viz, general research, etc.

As a Senior-level and Graduate-level course, you develop your own project ideas (with our help). Your primary task is to challenge your own abilities and push the boundaries of your current knowledge.



UF Catalog Course Description Course Details Learning

Credits: 3; Prereq: ART 2620C (Net Art) or with permission of faculty.

Jack Stenner, Ph.D

Associate Professor, Art + Technology

Office: FAC 304

Office Hours: Th 11:30am-12:30pm

352.213.0997 stenner@ufl.edu

Undergraduate: ART 4612c Section 11633 Graduate: ART 6925c Section 11699

Class: PHYSICAL - Fine Arts Bldg C Room 302

Time: T/Th 8:30AM - 11:30AM

Website: http://jackstenner.com/teaching/ai

Listserv: Class contact will be made UF email and via Discord (evite to be $\ensuremath{\text{p}}$

Objectives

Over the course of the semester, the goal is to help you develop your art practice in the following ways:

1

Context

Become aware of the history and material foundation of Al.

2

Synthesis

Learn the appropriate integration of digital processes.

3

Criticality

Engage meaningful discussion and develop criticality.

4.

Awareness

Gain an awareness of related work in the field. 5

Communicate

Propose ideas in a way that clearly demonstrates intent. 6

FUN

Have FUN!



Grades will be based 90% on projects, reviews, and class assignments. 10% will be based on class participation. See below for the breakdown. Participation means you are expected to constructively criticize your peers and participate in class discussions. Failure to do so will impact your participation grade.

Detailed, specific info on grades and grading can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

Notwithstanding the description of grades above, generally, grades are conceived in this way:

A(Excellent) Student's work is of exceptional quality and the solutions to problems show a depth of understanding of the program requirements. Project is fully developed and presented well both orally and graphically. Student has developed a strong and appropriate concept that clearly enhances the overall solution. The full potential of the problem has been realized and demonstrated.

B(Good) Student's work shows above average understanding and clear potential. All program requirements are fulfilled and clearly and concisely presented.

C(Fair) Student's work meets minimum objectives of course and solves major problem requirements. Work shows normal understanding and effort. Quality of project as well as the development of knowledge and skills is average.

D(Poor) Student's work shows limited understanding and/or effort. Minimum problem requirements have not been met. Quality of project or performance as well as development of knowledge and skills is below average.

F(Failure) Student's work is unresolved, incomplete and/or unclear. Minimum course objectives or project requirements are not met, and student's work shows lack of understanding and/or effort. Quality of project or performance is not acceptable.

Instructor's evaluation of student's interest, motivation, attendance, proficiency and overall development or improvement during the semester will be taken into consideration in determining the final course grade. This syllabus is subject to refinement and development throughout the semester based on feedback and class interaction. Policies and grading criteria are absolute and will not change. Any substantial changes will be discussed with the class prior to implementation.

Grading breakdown:

Assignments (5) = 50% Reflections (10) = 20% Final Project = 20% Participation = 10% Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Despite what some lunatics might say, Covid-19 is STILL a problem. We are required to meet in person this semester, but thankfully there is a vaccine. Please get one! You MUST, at a minimum, follow UF Covid-19 Guidance as a member of this community.

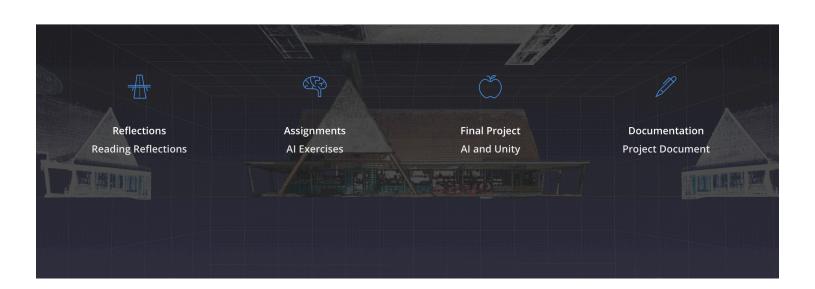


Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.



Readings will consist of .pdfs and URLs available on the class website. While not required, I highly recommend Atlas of AI by Kate Crawford.

Projects



Experiments in ARTificial Intelligence Schedule

return to course

Al Schedule 2022 Thursday 08.25

Week 1: Introduction and Setup

Content:

Syllabus Review

Intro to Experiments in ARTificial Intelligence

Intro to Art, Artists and Al

SCREEN: Naked Al

Assignment:

Complete the reading(s) below and post reflections on Canvas (due: Tuesday, Aug. 30.)

BOOKMARK: UF LinkedIn Experiments in ARTificial Intelligence Playlist

Sign up for DALL•E 2 Preview HERE

Join Midjourney Discord. See instructions HERE

Join Class Discord. Link provided in class.

Research the work of Heather Dewey-Hagborg and prepare questions.

Readings:

Slocombe, Will. "Machine Visions: Artificial Intelligence, Society, and Control." In Al Narratives, Cave, Dehal, Sarsvati et.al, 213–36. Oxford University Press, 2020.

Tuesday 08.30, Thursday 09.01

Week 2: What is AI? History of Machine Intelligence

Content:

Discuss reading(s) assigned last week.

HiPerGator Training: Go to UF Coursera Training and take HiPerGator Account Training (due: Tuesday, Sept. 06). More info HERE but you MUST take the Coursera course.

WATCH: UF LinkedIn Experiments in ARTificial Intelligence Playlist - Unix Essential Training

Experiment with Midjourney and DALL*E 2 - post favs to class Discord.

REQUIRED: Attend Visiting Artist Heather Dewey-Hagborg's talk tonight at 6:15PM

Assignment:

Complete the reading(s) below and post reflections on Canvas for discussion next week.

BE SURE YOU'VE completed the Unix tutorial AND the HiPerGator Training

Readings:

Crawford, Kate with Hao, Karen. "Stop Talking about Al Ethics. It's Time to Talk about Power." n.d. MIT Technology Review, April 23, 2021.

Tuesday 09.06, Thursday 09.08

Week 3: Art, Artists and Al

Content:

Discuss reading(s) assigned last week.

SCREEN: Coded Bias

STUDIO: BASH Terminal + HiPerGator setup, Development Environment Configuration

DEMO: Introduction to AI techniques

Slides for Research Computing Orientation.

FYI: I added a ZSH Setup overview on my Teaching Support forum: HERE

Assignment:

Complete the reading(s) below and post reflections on Canvas.

Assignment 1: Experiment with Midjourney and DALL*E 2, prepare for CRIT, post reflection to Canvas.

Readings:

Readings:

Steyerl, Hito. "Medya: Autonomy of Images" in Astro Noise: A Survival Guide for Living under Total Surveillance. by Laura Poitras, New York: Whitney Museum of American Art, 2016. pp. 162-177

Tuesday 09.13, Thursday 09.15

Week 4: Image Classification 1

Content:

Discuss reading(s).

CRIT: Assignment 1 - Midjourney/DALL•E 2 experiments.

SCREEN: Lo and Behold: Reveries of the Connected World, by Werner Herzog

Intro to P5.js and ml5.js

Learn to implement basic image classification using existing machine learning models.

Assignment:

Complete the reading(s) below and post reflection on Canvas.

Assignment 2 - Create a network-based artwork using p5.js that incorporates still imagery, video and, optionally, some form of interaction.

Readings:

Mackenzie, Adrian. "The Production of Prediction: What Does Machine Learning Want?" European Journal of Cultural Studies 18, no. 4-5 (August 1, 2015): 429-45.

Tuesday 09.20, Thursday 09.22

Week 5: Image Classification 2

Content:

FIELD TRIP: Tour of HiPerGator AI at UF High Performance Data Center (Tuesday)

Discuss reading(s).

CRIT: Assignment 2 - P5.js artwork

Saving and loading training models, exploring multiple techniques.

Google Colab and Jupyter Notebooks and using them with HiPerGator

Assignment:

Assignment 3 - Image Classification Artwork 1

Readings:

None

Tuesday 09.27, Thursday 09.29

Week 6: Object Detection, Computer Vision

Content:

CRIT: Assignment 3 - Image Classification Artwork 1 Learn to implement Object Detection.

Assignment:

Complete the reading(s) below and post reflection on Canvas.
Assignment 4 - Create an artwork using Object Detection

Readings:

Boden, Margaret A., and Ernest A. Edmonds. "Explaining the Ineffable." In From Fingers to Digits: An Artificial Aesthetic, 61–89. The MIT Press, 2019.

Tuesday 10.04, Thursday 10.06

Week 7: Transfer Learning

Content:

Discuss reading(s).

Content:

Discuss reading(s)

Learn to create and train your own neural network.

Assignment:

Continue development of Assignment 4 - Object Detection Artwork

Readings:

None

Tuesday 10.11, Thursday 10.13

Week 8: Working with TEXT

Content

CRIT: Assignment 4 - Object Detection Artwork (Tues/Thurs)

Learn about Sentiment Analysis, GPT2, Text to Image, Word2Vec, etc.

Assignment:

Complete the reading(s) below and post reflection on Canvas.

Assignment 5 - Create an experimental Al artwork.

Readings:

Droitcour, Brian. "GANs and NFTs." ARTnews.Com (blog), May 28, 2021.

Tuesday 10.18, Thursday 10.20

Week 9: Working with a Supercomputer

Content:

Discuss reading(s).

How to work with UF's HiPerGator -> Step by Step

Begin to work with HiPerGator and Jupyter notebooks: Disco Diffusion, VQGAN, etc.

Is Cryptocurrency the Magic Bullet for Social Change?

Assignment:

Continue development of Assignment 5 - Experimental AI artwork

Readings:

None

Tuesday 10.25,

Week 10: Disco Diffusion - Stills

Content:

Learn about text to image or CLIP-guided diffusion systems.

Prompt engineering, parameters, models.

Assignment

Complete the reading(s) below and post reflection on Canvas.

Continue development of Assignment 5 - Experimental AI artwork

Readings:

Agostinelli, Erika. "I Don't Trust AI': The Role of Explainability in Responsible AI." Erika Agostinelli, April 1, 2021.

Women in Data Science, Bristol 2021 - Agostinelli Crowdcast begins at 1:13:19

Tuesday 11.01, Thursday 11.03

Week 11: Disco Diffusion - Stills

Content:

Discuss reading(s).

Assignment:

Experiment with Disco Diffusion

Readings:

None

Tuesday 11.08, Thursday 11.10

Week 12: Disco Diffusion - Animation

Content:

How to create animations with Disco Diffusion STUDIO - Experiment with techniques, develop project

Assignment:

Develop your final project. EXPERIMENT!

BEGIN: Final Project, brainstorm and prepare to present concept in class on Tuesday.

Complete the reading(s) below and post reflection on Canvas.

Readings:

Crawford, Kate, and Trevor Paglen. "Excavating Al." -. Accessed May 12, 2021.

Crawford, Kate. "Time to Regulate Al That Interprets Human Emotions." Nature 592, no. 7853 (April 6, 2021): 167–167.

Tuesday 11.15, Thursday 11.17

Week 13: EXPERIMENTS

Content:

Review Final Project concepts.

STUDIO - Develop AI Final artwork.

Assignment:

Continue work on Final Project - Al artwork

Readings:

VQGAN+CLIP — How does it work?

VQGAN+CLIP github

Make your own AI generated movies with VQGAN+CLIP (YouTube)

List of VQGAN+CLIP Implementations

Tuesday 11.22, Thursday 11.24

Week 14: AI EXPERIMENTS - NVIDIA Jetson

Content:

DEMO: NVIDIA Jetson Nano

Assignment:

Continue work on Final Project - Al artwork

Complete the viewing below and post reflection on Canvas.

Readings:

Manovich, Lev. Al and the Myth of Creativity, DigitalFUTURES world. Digital Consortium Lecture - The Hitchhiker's Guide to Artificial Intelligence. Accessed August 5, 2021.

Tuesday 11.29, Thursday 12.01

Week 15: AI EXPERIMENTS - NVIDIA Jetson

Content:

Experiment with NVIDIA Jetson Nano

jack stenner Home info art - teaching cv contact login

Content:

DEMO: NVIDIA Jetson Nano

Assignment:

Continue work on Final Project - Al artwork

Complete the viewing below and post reflection on Canvas.

Readings:

Manovich, Lev. Al and the Myth of Creativity, DigitalFUTURES world. Digital Consortium Lecture - The Hitchhiker's Guide to Artificial Intelligence. Accessed August 5, 2021.

Tuesday 11.29, Thursday 12.01

Week 15: AI EXPERIMENTS - NVIDIA Jetson

Content:

Experiment with NVIDIA Jetson Nano STUDIO - Develop your Final Project

Assignment:

Continue work on Final Project

READ:The Illustrated VQGAN

Readings:

None

Tuesday 12.06

Week 16: AI EXPERIMENTS

Content:

STUDIO - Develop Final Project

NFT Discussion at Art Basel Miami

New Study on NFTs Deflates the "Democratic" Potential for the Medium

Assignment:

FINISH work on Final Project

Readings:

None

Friday 12.16

Exam Week: Final Exams - UF Official Exam time: 7:30AM - 9:30AM.

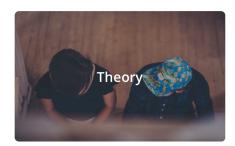
FINAL CRITIQUE: Black Box

ARTificial Intelligence Resources

back to Experiments in ARTificial Intelligence back to Full Luxury AI







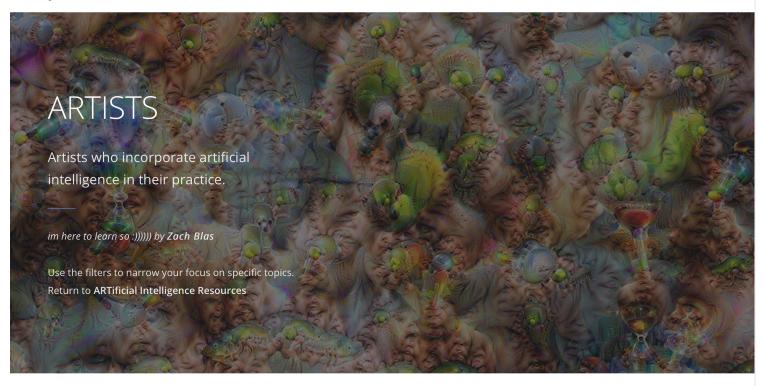
My Support Forum

jack stenner

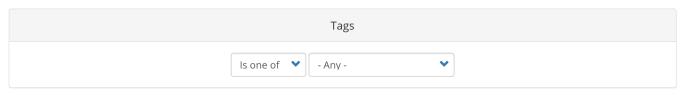
artist | professor | slave to the machine

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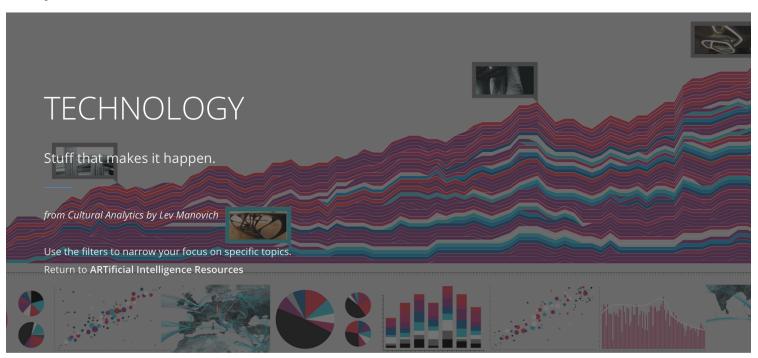


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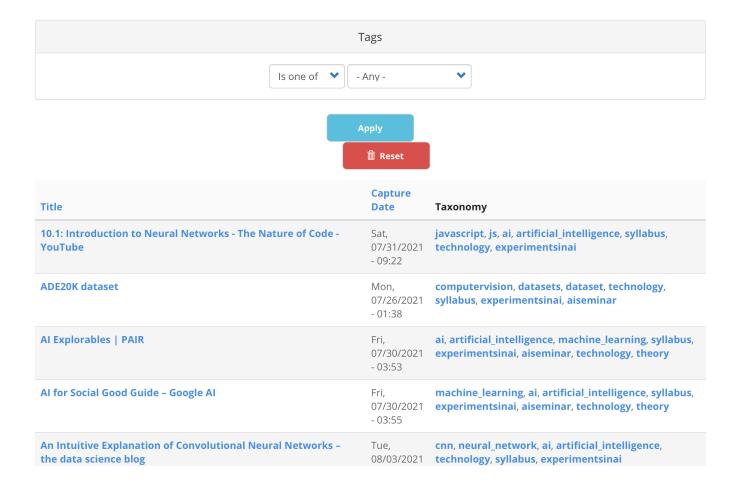




Artist	Capture Date	Taxonomy
A Data Artist's Guide to Putting People (and Privacy) First	Fri, 05/07/2021 - 02:59	data, data_visualization, ai, artificial_intelligence, artist, experimentsinai, syllabus
Anatomy of an Al System	Mon, 09/10/2018 - 05:16	amazon, infrastructure, ai, artificial_intelligence, art, artist syllabus, experimentsinai, aiseminar
Artificial Intelligence & Life Art – Prix Ars Electronica	Mon, 06/14/2021 - 04:26	experimentsinai, syllabus, artist, art, artificial_intelligence ai, aiseminar
Beck - Hyperlife (Hyperspace: A.I. Exploration) - YouTube	Wed, 07/28/2021 - 03:04	ai, artificial_intelligence, artist, stylegan, syllabus, experimentsinai
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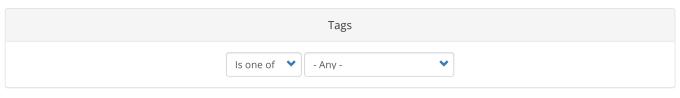


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Title	Capture Date	Taxonomy
"I don't trust AI": the role of Explainability in Responsible AI	Wed, 07/28/2021 - 06:49	ai, artificial_intelligence, theory, syllabus, experimentsinai, aiseminar
Al Explorables PAIR	Fri, 07/30/2021 - 03:53	ai, artificial_intelligence, machine_learning, syllabus, experimentsinai, aiseminar, technology, theory
Al for Social Good Guide – Google Al	Fri, 07/30/2021 - 03:55	machine_learning, ai, artificial_intelligence, syllabus, experimentsinai aiseminar, technology, theory
Algorithmic Justice League - Unmasking Al harms and biases	Wed, 04/28/2021 - 05:24	ai, artificial_intelligence, experimentsinai, aiseminar, syllabus, theory
Cybertopia - Dreams of Silicon Valley - Docu - 2015 - YouTube	Wed, 04/22/2020	california_ideology, silicon_valley, cybernetics, libertarianism, technologicaldeterminism, ai, artificial_intelligence, syllabus, theory,



Stenner Teaching Support

tips and tutorials for student



■ Quick links • FAQ Use FAQ Use FAQ

Unanswered topics Active topics

Tutorials

		Topics		Replies	Views	Last post
A+T Faciliti	ies ner » Wed Mar 17, 2021 12:02	pm		0	198	by jstenner ≥ Wed Mar 17, 2021 12:02 pm
173	OM: Using Pro Tools HD Ner » Tue Apr 02, 2013 7:36 ar			3	1094	by jstenner ☑ Tue Oct 09, 2018 7:20 am
	Getting Started Thu Mar 03, 2011 7:17 am			1	2423	by jstenner ☑ Mon Feb 05, 2018 7:22 am
	video preparation ner » Thu Mar 03, 2011 7:11 ar	n		3	3730	by jstenner ☑ Wed Nov 22, 2017 7:15 am
BLACK BOX Solve by jstenness	C - FAC 302 ner » Tue Oct 10, 2017 6:19 ar	n		0	788	by jstenner ☑ Tue Oct 10, 2017 6:19 am
	ragon AND RED Raven ner » Mon Feb 25, 2013 2:24 p	m		6	3569	by mchristo Mon Oct 10, 2016 2:38 pm
	Instructions Fri Sep 27, 2013 11:17 am			0	867	by mchristo ☑ Fri Sep 27, 2013 11:17 am
	a - VRay - EXR to After Ending Tue Apr 27, 2021 4:06 am	fects Workflow 04.26.2021		0	123	by jstenner ☑ Tue Apr 27, 2021 4:06 am
(/1)	eview Render in VRay ner » Wed Apr 14, 2021 4:12 a	m		0	125	by jstenner ☑ Wed Apr 14, 2021 4:12 am
	peauty and wire-frame r Sat Jan 30, 2021 1:50 pm	ender via Maya and V-Ray: 01.30.2021		0	192	by jstenner ☑ Sat Jan 30, 2021 1:50 pm
	3D Glow demo: 12.02.2 Wed Dec 02, 2020 12:55 pm	020		0	499	by jstenner ≥ Wed Dec 02, 2020 12:55 pm
	3D pathfinding using Na Mon Nov 02, 2020 5:26 pm	vMesh demo: 10.29.2020		0	280	by jstenner ☑ Mon Nov 02, 2020 5:26 pm
	to Unity3D BlendShape Mon Nov 02, 2020 4:51 pm	Demo: 10:29.2020		0	278	by jstenner ≥ Mon Nov 02, 2020 4:51 pm
	a, Cinemachine, Particle Tue Oct 13, 2020 3:44 am	Sprite Demo: 10.08.2020		0	924	by jstenner ☑ Tue Oct 13, 2020 3:44 am
	Workflow 2019 Tue Mar 19, 2019 7:27 am			0	647	by jstenner ☑ Tue Mar 19, 2019 7:27 am
	Audio with Zoom F8 Fiel Wed Sep 26, 2018 1:10 pm	d Recorder		0	686	by jstenner
(/1)	A+T Motion Composite ner » Fri Apr 03, 2015 3:40 am			1	10241	by jstenner ☑ Wed Apr 12, 2017 8:41 am
(/1)	HDRI Spherical Images w ner » Wed Apr 05, 2017 8:35 a	th Canon 5D and Nodal Ninja ^m		0	822	by jstenner ☑ Wed Apr 05, 2017 8:35 am
	IDROID + Unity3D Notes Tue Apr 04, 2017 9:27 am			0	716	by arlong95 ☑ Tue Apr 04, 2017 9:27 am
SHOOTING: by jstenner »	Filtration Tue Apr 04, 2017 7:09 am			0	708	by jstenner ☑ Tue Apr 04, 2017 7:09 am
(/1)	eader Connections sto » Mon Oct 10, 2016 2:38 pt	n		0	585	by mchristo Mon Oct 10, 2016 2:38 pm
Panasonic G by jstenner »	GH4 Info Mon May 18, 2015 3:35 pm			1	515	by jstenner Z Tue Oct 04, 2016 8:48 am
A+T Microp	phone Info ner » Wed Feb 04, 2015 6:37 a	m	12	12	1942	by jstenner Wed Feb 04, 2015 8:04 am
	Aklil and Magic Lantern Mon Sep 29, 2014 10:47 am			0	970	by jstenner ≥ Mon Sep 29, 2014 10:47 am
(/1)	eo Preparation [OBSOLE ner » Wed Nov 27, 2013 9:34 a	-		0	2608	by jstenner ☑ Wed Nov 27, 2013 9:34 am

41 topics 1 2 >

Jump to | ▼

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