

Dr. Kate Compton

- 2004-2006 **Pomona College**
Pomona College, B.A. (Media Studies)
- 2006-2008 **Georgia Institute of Technology**
Georgia Institute of Technology, M.S. (Interactive Design and Technology)
- 2011-2019 **University of California, Santa Cruz**
University of California, Santa Cruz, PhD (Computer Science)

Research and Teaching Interest

Research interests: Human-centered AI (small-model, embodied/interactive, creativity-support); software engineering for "folk infrastructure" (lightweight, community-owned systems) and "casual creators" (software for everyday creativity); collaborative creativity platforms; open-source toolmaking; social computing and digital sovereignty.

Teaching interests: Project-based courses in creative AI, generative methods, HCI and social computing, games and AR/VR; responsible and transparent AI practice; student project mentorship, fostering student opportunities for community engagement and public showcases.

Contact

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Mission: To make AI accessible and steerable by every community: poets, coders, historians, artists, children, and casually creative people. To help people "make things that make things" and own their own creative processes.

Skills

generative AI embodied AI chatbots social network design simulation software development web development VR/AR
game design procedural animation interactive narrative game jams and hackathons WebXR/OpenGL/THREE.JS Javascript
Python physical design and invention open source entrepreneurship and startups patent development course design

Employment

Jan 2024 - present	The LEGO Group Play Invention Lead, Digital (Director)	Sep 2012 - May 2015	UCSC, DARPA grant CHEKOFV CSFV, Graduate Researcher
Sep 2020 - Dec 2023	Northwestern University Assistant Professor of Instruction, Computer Science	May 2012 - current	self Independent consulting (Google, Zynga, Autonomiq, GX42, LEGO, Genentech, & others)
May 2019 - Sep 2020	UCSC Center for Research in Open Source Software CROSS Incubator Fellowship	Jan 2014 - March 2014	UCSC, Chancellors Teaching Fellowship Instructor ("Generative Methods")
March 2018	NYU (ITP, hosted by Daniel Shiffman) 1 Week Residency at NYU	4 wcks Summer 2012	COSMOS (California State Summer School) Instructor ("Video Game Design: From Concept to Code")
Aug 2015 - Jun 2018	UCSC TAships (Intro 3D Modelling, Introduction to Data Structures (course development + TAsip, Alternative Controllers, Intro to 3D Animation)	8 wcks Jun - Aug 2012	UCSC Computer Science Instructor ("Game Design Practicum")
April 2016 - Feb 2017	Google (via Adecco staffing) Experimental Prototyper embedded with the Google "Doodles and Delight" Team	2011-2015	Seebright (startup for AR headset) Inventor and Co-founder
May 2015 - Aug 2015	Google (Google Now Team) Intern	Aug 2006 - Aug 2011	Maxis/Electronic Arts Technical Artist (Spore, Darkspore, Simcity, others)

Publications

Apr 2023	<u>"Conceptual art made real: why procedural content generation is impossible"</u> Karth, Compton - Proceedings of the 18th International Conference on the foundations of digital games (paper)	Aug 2016	<u>"Design Lessons From Binary Fission: A Crowd Sourced Game for Precondition Discovery"</u> Compton, Logas, Osborn, Chakrabortti, Coffman, Fava, Lederle-Ensign, Lin, Mazeika, Mobramaein, Pagnutti, Sanchez, Whitehead, Laurel - Foundations of Digital Games 2016 (paper)
Jan 2021	<u>"Conversation Starter: Imagining Autotelic IDEs."</u> Compton - AIIDE Workshops (paper)	Nov 2016	<u>"Tracery: an author-focused generative text tool"</u> Compton, Kybartas, Mateas - International Conference on Interactive Digital Storytelling (paper)
Jul 2020	<u>"How Can an A.I. Develop Taste?"</u> Compton - Slate Magazine (invited article)	Aug 2016	<u>"Do you like this art i made you: introducing techne, a creative artbot commune"</u> Pagnutti, Compton, Whitehead - PCG Workshop at Foundations of Digital Games, 2016 (paper)
Aug 2019	<u>"Cozy Mystery Construction Kit: prototyping toward an AI-assisted collaborative storytelling mystery game"</u> Kreminski, Acharya, Junius, Oliver, Compton, Dickinson, Focht, Mason, Mazeika, Wardrip-Fruin - Proceedings of the 14th International Conference on the Foundations of Digital Games (paper)	Jul 2015	<u>"Casual Creators"</u> Compton, Mateas - International Conference on Computational Creativity (paper)
Mar 2019	<u>"Getting started with generators"</u> Compton, ed. Short, Adams - Procedural Storytelling in Game Design (book chapter)	Jan 2015	<u>"Visualizing loops and data structures in Xylem: The Code of Plants"</u> Logas, Vallejos, Osborn, Compton, Whitehead - 2015 IEEE/ACM 4th International Workshop on Games and Software Engineering ... (paper)
Mar 2018	<u>"Casual Creators"</u> Compton - UCSC Dissertation in Computer Science (dissertation)	Jun 2015	<u>"Bot Print: Casual Robot Evolution"</u> Compton, Lederle-Ensign, Lin, Mazeika - Computational Creativity & Games Workshop at ICCG (paper)
Nov 2018	<u>"Chancery"</u> Compton - Experimental AI in Games, AIIDE 2018 (demo)	May 2015	<u>"A Different Kind of Physics: Interactive evolution of expressive dancers and choreography"</u> Compton, Mateas - Computational Creativity & Games Workshop at ICCG (paper)
Nov 2018	<u>"Freedom of Movement: Generative Responses to Motion Control"</u> Compton, Mateas - Experimental AI in Games, AIIDE 2018 (paper)	Jun 2014	<u>"Tracery: Approachable Story Grammar Authoring for Casual Users"</u> Compton, Filstrup, Mateas - Intelligent Narrative Technologies 7 (poster)
Oct 2017	<u>"Generominos: Ideation cards for interactive generativity"</u> Compton, Melcer, Mateas - Experimental AI in Games, AIIDE 2017 (paper)	Jan 2014	<u>"Xylem: The Code of Plants."</u> Logas, Whitehead, Mateas, Vallejos, Scott, Murray, Compton, Osborn, Salvatore, Shapiro, Lin, Sanchez, Shavlovsky, Lewis, Cetina, Clementi - Foundations of Digital Games 2014 (paper)
Oct 2017	<u>"Generative Framework of Generativity"</u> Compton, Mateas - Experimental AI in Games, AIIDE 2017 (paper)	May 2013	<u>"Generative Methods"</u> Compton, Osborn, Mateas - PCG Workshop, Foundations of Digital Games (paper)
Aug 2017	<u>"Little Procedural People"</u> Compton, Mateas - PCG Workshop, Foundations of Digital Games Conference (paper)	May 2012	<u>"Anza Island: Novel Gameplay Using ASP"</u> Compton, Smith, Mateas - PCG Workshop, Foundations of Digital Games (paper)
Apr 2017	<u>"A shared language for creative communities of artbots"</u> Compton, Pagnutti, Whitehead - Co-Creation Workshop, ICCG 2017 (paper)	Aug 2007	<u>"Creating Spherical Worlds"</u> Compton, Grieve, Goldman, Quigley, Stratton, Todd, Willmott - SIGGRAPH (paper)
Jan 2017	<u>"Generative Art Toys"</u> Compton, ed. Short, Adams - Procedural Generation in Game Design (book chapter)	Jun 2006	<u>"Procedural Level Design for Platform Games" (poster with 128 citations)</u> Compton, Mateas - Artificial Intelligence in Digital Entertainment (poster)

Talks

Nov 2025	(upcoming) Artificial Intelligence in Digital Entertainment Keynote	Nov 2018	Project Horseshoe Keynote:'Casual Creators' event info
Aug 2025	Polaris Game Design Retreat Invited workshop	Oct 2018	UVa Puzzle Poetry Symposium: Puzzles, Bots, and Poems Tutorial:'Tracery Tutorial' event info
Jul 2025	Dagstuhl Seminar: New Frontiers in AI for Game Design Invited workshop	Scp 2018	XOXO Talk:'Future Aesthetics' event info
Oct 2024	International Conference on Game Jams, Hackathons and Game Creation Events (Copenhagen) Keynote:'From Living Rooms to Corporate Headquarters, And Back Again: lessons from hackathon culture' event info slides	Jun 2018	FluentConf Lightning talk:'Surprise: The Joy of Generativity in JS'
Oct 2024	Next Level Conference on Games (Kings College London) Talk:'Girders, Gum, and Gargoyles: combining old-school generativity with new models for the best of both!' video event info	Jun 2018	Open-Source Software Tools for the Arts Invited workshop
Aug 2024	Conference on Games (Milan) Keynote:'Terrible together – how AI can make us comfortable being creative'	Mar 2018	MARS Invited workshop event info
May 2023	TedX NorthwesternU Talk:'Liquid Art - A Different Perspective on Generative Art' video	Mar 2018	JSConf Iceland 'Creating Generative Art with Javascript' video event info
Mar 2023	Game Developers Conference Panel:'Panel moderator: "Being a Unicorn - Multiclassing in an Industry That Wants Specialization"' video	Nov 2017	Internetdagarna (Stockholm) 'Can a computer help you be more creative?' event info
Dec 2022	MIT Media Lab invited talk Talk:'Terrible Together: A creativity manifesto' video	Nov 2017	Hackers Talk:'3D Printing and the Fall of Modernism' event info slides
Nov 2022	Polaris Game Design Retreat Invited workshop video	Oct 2017	Github Universe summit Talk:'Bot Poetics'
Oct 2021	StrangeLoop Conference Keynote:'Poems in an accidental language' video	Jun 2017	Autodesk: Ideas Driving Change Summit Invited workshop event info
Jan 2023	GamesNow! Aalto University Talk:'Liquid Art - Machine Learning Art for Exploration and Interactivity' video	Jun 2017	YConf (invite-only Y Combinator summit) Talk:'Bot Poetics'
Feb 2020	!!ConWest (Santa Cruz, CA) Keynote:'Of Muppets, Metaballs, and Ballroom Dance!' video	Apr 2017	Interrupt.xyz Talk:'Bot Poetics' video
Dec 2020	Github Universe summit Tutorial:'Ten Minute Twitterbot' video	Mar 2017	Game Developers Conference Talk:'Practical Procedural Generation for Everyone (430K views!)' video
Oct 2020	Roguelike Celebration 2020 Talk:'Polite Programming Languages: Designing a Generative Language without a PL Degree' video	Oct 2016	Workshop in the Woods, Dartmouth Tutorial:'Tracery' event info
Nov 2019	Northwestern University invited talk Talk:'Casual Creators'	Scp 2016	Roguelike Celebration 2016 Talk:'Practical Low-Effort PCG' video slides
Oct 2019	AIIDE 2019 (GaTech) Keynote:'Casual Creators'	Jul 2016	NuclAI 'Techne: an Art Commune for Artbots' video slides
Scp 2019	IGGI Conference (York University, UK) Keynote:'Casual Creators'	Jun 2016	FooCamp Invited workshop event info
Jun 2019	Indexical invited talk Talk:'The Future is Baroque' event info	May 2016	2016 Banff Workshop: Computational Modeling in Games Invited workshop
Mar 2019	Dissertation defense Defense:'Casual Creators' video	Mar 2016	GDC Indie Summit 2016 Organizer:'Tracery: Generating Text, graphics and more!' video slides
		Nov 2015	ProcJam 2015 (Goldsmiths College, London) Keynote:'Let it Grow: Practical Procedural Generation from the Ground Up' video
		Jan 2015	Tangible, Embedded and Embodied Interaction 2015, Stanford Invited workshop
		Oct 2014	Grace Hopper Conference Panel:'New Perspectives on Gender-Inclusive Game Design'
		Aug 2012	Media Systems Workshop Invited workshop event info

Honors

2011-2012	UC Chancellors Fellowship
2014	UC Chancellors Teaching Fellowship
applied 2012, granted 2016	Patent US20130141360A1
applied 2016 (pending)	Patent US20170017088A1
2016	GDC 2016 IGDA Women-in-Games Ambassador
2018-	CROSS Open Source Incubator Award
Spring 2021	OSSTA Residency
2020-2021	McCormick Engineering Instructor of the Year
Summer 2023	Stochastic Labs Residency (https://stochasticlabs.org/)

Service

Conference work

Co-founded the 2020 Workshop on Casual Creators, International Conference on Computational Creativity

Class design and teaching

Taught thousands of Northwestern University grad and undergrad students in multiple new (CS396) and redesigned (CS150) classes. All the 396 classes were done via Glitch and [Github](#), so resources were open-sourced to the community

- CS150 Fundamentals of Programming 1.5
- CS396 Creative Machine Learning
- CS396 Generative Methods
- CS396 AR/VR Social Studio

Articles about my work

[Kate Compton: Serious play](#) Rachel Raiyani, UC Santa Cruz Magazine, 2025
[An Exclusive Look Inside the Lego Group's Super Secret Lab Dreaming Up the Future of Play](#) Jason Aten, Inc Magazine, 2024
[Generative Art Is Stupid: That's how it should be](#) Ian Bogost, The Atlantic, 2023
[Coding Costumes](#) Erica Massini, McCormick Engineering Magazine, 2021
[How Long Before We Can Build 'Westworld' Host Robots for Real?](#) Lux Alptraum, Vice Magazine 2016

Materials for community outreach

Zines (informal guides): [Tracery](#), [Opulent AI](#), [Encyclopedia of Generativity](#), [Everyone's AI](#), [Casual Creators](#), [Open Source Tools for the Arts](#), [Chatpets and Cheeseplates](#), [Using ChatGPT for Learning](#), Bot-maker [merit badges](#)