Kevin Gold

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address and phone redacted for web

Employment

Boston University, 2021-present
Faculty of Computing and Data Sciences
665 Commonwealth Ave, Boston, MA 02215
Professor of the Practice: Data Science Programming, Math, and AI/ML

Northeastern University, 2015-2021
Department of Computer Science
440 Huntington Avenue, Boston, MA 02115
Associate Teaching Professor: AI, Algorithms, Math for CS, Theory of Computation

Broad Institute, 2015
415 Main St., Cambridge, MA 02142
Data Scientist: Cancer research

Google, 2013-2014
5 Cambridge Center, Cambridge, MA 02142
Software Engineeer: YouTube data analysis, "Webanswers" for search results

MIT Lincoln Laboratory, 2011-2013
244 Wood St, Lexington, MA 02420
Technical Staff: Machine learning and AI for cybersecurity

Rochester Institute of Technology, 2010-2011
Department of Interactive Games and Media, Rochester Institute of Technology
One Lomb Memorial Drive, Rochester, NY 14623
Assistant Professor: Introductory Game Programming, Probability and AI

Wellesley College, 2008-2010
Department of Computer Science
106 Central St., Wellesley, MA 02481
Hess Visiting Assistant Professor: AI, Introductory Web Development, Games

Epson Palo Alto Labs, 2001-2002
3145 Porter Drive, Palo Alto, CA 94304
Algorithm Design Engineer: Design of power-efficient MP4 decoder algorithms

Education

Yale University, New Haven, CT, USA
Ph.D., Computer Science, 2008.
M.S., Computer Science, 2005.

Harvard University, Cambridge, MA, USA
A.B., Computer Science, 2001. Phi Beta Kappa.

Honors and Awards

Best-in-Session Award, AIET 2025
BU Computing & Data Sciences Citizenship Award, 2024
Best-in-Session Award, AIET 2024
Best Paper Award, International Conference on Development and Learning, 2007

Courses Taught as Faculty

With populations and teaching effectiveness ratings out of 5 where available. Courses where I created the original course content (lecture content, homework problems, etc) indicated with an asterisk.

Boston University

Introduction to Data Science with Python* - Fall 2021 (11,4.5), Spring 2022 (86, 3.8), Fall 2022 (111, 4.2), Spring 2023 (127, 4.1), Fall 2023 (127), Spring 2024 (200), Fall 2024 (91), Spring 2025 (66), Fall 2025 (69), Spring 2026 (36).
Foundations of Data Science* - Fall 2021 (7, 4.8), Spring 2022 (45, 3.75)
Introduction to Machine Learning and AI* - Fall 2022 (24, 4.7), Spring 2023 (74, 4.4), Fall 2023 (37), Spring 2024 (74), Fall 2024 (81), Spring 2025 (101), Fall 2025 (75), Spring 2026 (111).
Teaching Practicum* - Fall 2024 (5), Spring 2024 (4), Fall 2025 (11), Spring 2026 (12).

Northeastern University

Theory of Computation* - Fall '15 (78, 4.7), Spring '16 (53, 4.7), Spring '17 (89, 4.7)
Programming Design Paradigms (Master's intro course) - Spring '16 (38, 4.3)
Algorithms and Data* - Summer 1 '16 (81, 4.7), Summer 2 '16 (32, 4.5), Summer 1 '17 (97, 4.4), Summer 2 '17 (66, 4.7), Summer 2 '18 (76, 4.8), Summer 2 '19 (83,4.8), Fall '20 $\times 2$ (40/33,4.8/5)
Discrete Structures (course coordinator for about 500 students) - Fall '16 (45, 4.6), Spring '17 (68, 4.7), Fall '17 (79, 4.6), Spring '18 (112, 4.5), Fall '18 (227, 4.4)
Discrete and Data Structures* (ALIGN bridge program) - Fall '16 (overload, 31, 4.8)
Game Artificial Intelligence* (combined undergrad/Master's) - Spring '18 (56, 4.7), Spring '19 (77,4.8)
Foundations of Artificial Intelligence* - Summer 1 '18 (59, 4.8), Summer 1 '19 (UG/M 43/14,4.9/4.2), Summer 1 '20 (UG/M 56/22, 4.6/4.6), Fall '20 (UG 85, 4.8), Summer 1 '21 (UG 80, 4.8)
Mathematics of Data Models* - Spring '19 (33,4.8), Spring '20 $\times 2$ (112/112,4.6/4.5)

RIT

Probabilistic Reasoning in Artificial Intelligence and Game Design*
Evolutionary Computation*
Game Software Development

Wellesley

Artificial Intelligence*
Games*
Research in Developmental Robotics*
Computer Science and the Internet

Peer-reviewed Publications

X. Fu and K. Gold (2025). "Tree-Structured Debate: Hierarchical Decomposition for Truthful Question Answering." Proceedings of WMAC 2026: AAAI 2026 Bridge Program on Advancing LLM-Based Multi-Agent Collaboration. AAAI.

K. Gold (2025). "LLM Practice Problem Generation in a Beginning Programming Class". To appear in Proceedings of AIET 2025, to be collected in Springer Lecture Notes on Data Engineering and Communications Technologies. *Best-in-session award.*

K. Gold and S. Geng (2024). "On the Helpfulness of a Zero-Shot Socratic Tutor". Proceedings of AIET 2024, collected in Artificial Intelligence in Education Technologies: New Development and Innovative Practices, ed. Tim Schlippe, Eric C. K. Cheng, Tianchong Wang. Springer Singapore. *Best-in-session award.*

K. Gold and S. Geng (2024). "Tracking the Evolution of Student Interactions with an LLM-powered Tutor." Proceedings of the 14th Learning Analytics and Knowledge Conference (LAK '24). ACM.

K. Gold (2013). "Learning to Efficiently Pursue Communication Goals on the Web With the GOSMR Architecture." AAAI 2013 Cognitive Systems track.

K. Gold, Z. Weber, B. Priest, K. Sittig, J. Ziegler, B. Streilein, and M. Mazumder (2013). "Modeling How Thinking About the Past and Future Impacts Network Traffic With the GOSMR Architecture." Proceedings of AAMAS 2013.

B. Priest and K.Gold (2013). "Utility Discounting Explains Informational Website Traffic Patterns Before a Hurricane." Proceedings of WWW 2013.

K. Gold, B. Priest, and K. Carter (2013). "An Expectation Maximization Approach to Detecting Compromised Remote Access Accounts." Proceedings of FLAIRS 2013 Cyber Security track.

K. Gold (2012). "Trigram Timmies and Bayesian Johnnies: Probabilistic Models of Personality in Dominion." Proceedings of AIIDE 2012, Palo Alto, CA.

K. Gold, C. Havasi, M. Anderson, and K. Arnold (2011). "Comparing Matrix Decomposition Methods for Meta-analysis and Reconstruction of Cognitive Neuroscience Results." Proceedings of FLAIRS 2011, Palm Beach, FL.

K. Gold and A. Olivier (2010). "Using Machine Translation to Convert Between Difficulties in Rhythm Games." Proceedings of AIIDE 2010, Palo Alto, CA.

K. Gold (2010). "Training goal recognition from low-level inputs in an action-adventure game." Proceedings of AIIDE 2010, Palo Alto, CA.

K. Gold and A. Petrosino (2010). "Using Information Gain to Build Meaningful Decision Forests for Multilabel Classification." Proceedings of ICDL 2010, Ann Arbor, Michigan.

K. Gold (2010) "Designer-Driven Intention Recognition in an Action-Adventure Game Using Fast Forward Bayesian Models." Proceedings of FLAIRS 2010, Daytona Beach, Florida.

A. Piplica, A. Olivier, A. Petrosino, and K. Gold (2010). "Learning to Identify and Track Imaginary Objects Implied by Gestures." Proceedings of FLAIRS 2010, Daytona Beach, Florida.

A. Petrosino and K. Gold. (2010) "Toward Fast Mapping for Robot Adjective Learning." 2010 AAAI Fall Symposium on Dialog with Robots. Arlington, Virginia.

A. Piplica, A. Olivier, A. Petrosino, and K. Gold. (2010) "Learning to Imagine Pretended Objects." IRIS 2010, Nagoya, Japan.

K. Gold, M. Doniec, C. Crick, and B. Scassellati (2009). "Robotic Vocabulary Building Using Extension Inference and Implicit Contrast." *Artificial Intelligence (AIJ)* 173(1), p. 145-166.

K. Gold and B. Scassellati (2009). "Using Probabilistic Reasoning Over Time to Self-Recognize." *Robotics and Autonomous Systems (RAS)* 57(4), p. 384-392.

K. Gold (2009). "An Information Pipeline Model of Human-Robot Interaction." Proceedings of the 4th ACM/IEEE International Conference on Human Robot Interaction (HRI-09), La Jolla, CA.

E. Kim, K. Gold, and B. Scassellati (2008). "What Prosody Tells Infants to Believe." Proceedings of the 7th International Conference on Development and Learning (ICDL-08), Monterey, CA.

K. Gold, M. Doniec, and B. Scassellati (2007). "Learning Grounded Semantics With Word Trees: Prepositions and Pronouns." Proceedings of the 6th International Conference on Development and Learning (ICDL-07), London, UK. *Best Paper Award.*

K. Gold and B. Scassellati (2007). "A Robot that Uses Existing Vocabulary to Infer Non-Visual Word Meanings From Observation." Proceedings of the Twenty-Second Conference on Artificial Intelligence (AAAI-07), Vancouver, BC, Canada.

K. Gold and B. Scassellati (2007). "A Bayesian Robot that Distinguishes 'Self' From 'Other."' Proceedings of the 29th Annual Meeting of the Cognitive Science Society (CogSci 2007), Nashville, Tennessee.

K. Gold, I. Fasel, N. Freier, and C. Torrey (2007). "Young Researchers' Views on the Current and Future State of HRI." Proceedings of the 2nd Annual Conference on Human-Robot Interaction (HRI-07), Washington, DC.

K. Gold and B. Scassellati. (2006) "Learning Acceptable Windows of Contingency." *Connection Science* 18(2), p. 217-228.

K. Gold and B. Scassellati. (2006) "Deictic Pronoun Learning and Mirror Self-Ident-

ification." Proceedings of the 6th International Conference on Epigenetic Robotics (EpiRob-06), Paris, France, p. 49-54.

K. Gold and B. Scassellati. (2006) "Audio Speech Segmentation Without Language-Specific Knowledge." Proceedings of the 28th Annual Meeting of the Cognitive Science Society (CogSci 2006), Vancouver, Canada.

K. Gold and B. Scassellati. (2006) "Grounded Pronoun Learning and Pronoun Reversal." 5th International Conference on Development and Learning (ICDL-06), Bloomington, Indiana.

K. Gold and B. Scassellati. (2006) "Using Context and Sensory Data to Learn First and Second Person Pronouns." 1st Annual Conference on Human-Robot Interaction (HRI-06), Salt Lake City, Utah.

B. Scassellati, C. Crick, K. Gold, E. Kim, F. Shic, and G. Sun. (2006) "Social Development." Computational Intelligence Magazine (IEEE) 1(3), p. 41-47.

K. Gold and B. Scassellati. (2005) "Learning About the Self and Others Through Contingency." AAAI Spring Symposium on Developmental Robotics, Palo Alto, CA.

P. Michel, K. Gold, and B. Scassellati. (2004) "Motion-Based Robotic Self-Recognition." IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-04). Sendai, Japan.

Grants

Shipley Center Future of Learning AI Grant (FLAG), 11/2/23.

Local Talks

"Teaching Tea" monthly talks on teaching practices, 9/23–

Panelist for BU AIDA Panel on Innovative Use of AI in STEM classrooms, 10/16/25

Moderator for BU AIDA Panel on AI Usage Policies in Courses, 10/1/25

Speaker at Symposium on Generative AI at BU in Academics and Administration, 2/25/25

TechTalk to Spark! student group about creating LLM applications, 11/15/2023

Talk to GENERATE student group about innovation in industry, 2/27/19

Talk to NUACM on the acceptability of unusual career trajectories, 2/17/16

Student Group Work

Judge for Spark! Demo Day, 2021-2023

Spark! TechTalk, 11/15/23

Mentor for Spark! Civic Tech Hackathon, 2/23

Competitive programming club faculty sponsor, 2018-2021

Advising

Co-adviser for Emily Yang, AIDA Clinic on AI File Analysis project, Spring '26

Co-adviser for Jessica Cannon, AIDA Clinic on AI File Analysis project, Fall '25 – Spring '26

Independent Study with Xiang Fu on methods to increase LLM accuracy, Summer '25

Independent Study with Amber Han on deep neural networks, Fall '17

Independent Study with undergraduate Cameron Sun on NLP analysis of code comments, Summer 1 '16

Mentor for junior staff member Ben Priest at Lincoln Laboratory, 2012-2013 (see publications)

Undergraduate thesis advisor, Allison Petrosino, Wellesley, 2010

Undergraduate research projects mentored and guided to conference publication, 2009-2010, Wellesley (undergraduates Andreya Piplica, Allison Petrosino, and Alex Olivier; see publications)

Summary of Service to Boston University

- Preceptor for Teaching (organizing "Teaching Teas"): 9/23-
- Teaching fellow training, Fall 2024-
- CDS Academic Integrity Committee, 2023-2025
- Speaker at CDS Admit Weekend, 2023-2024
- Speaker at CDS Friends and Family Day, 2023
- CDS Academic Policy Committee, 2022-2023
- Contributed interviews and evaluations to faculty hiring, 2021-2025

Summary of Service to Khoury College, Northeastern

- Advised in revamp of ALIGN curriculum
- Assistance with evaluation of College of Professional Studies IT Program
- Course coordinator for Discrete Structures, including participation in hiring process for administrative assistant and subsequent training
- Faculty sponsor for undergraduate competitive coding club
- Providing evaluations for most job talks for NTT faculty
- NUin program liaison, coordinating with Greek and Canadian remote sites

Professional Development

GenAI in CS Education Workshop, 3/16/26-3/17/26 (to attend)

AI in Education Symposium, 11/30/23

Workshop on the Implications of Generative AI (ChatGPT) in Education, 10/6/23

Center for Teaching and Learning Research workshop on hybrid flex learning, 7/17/20

Provost's full-time faculty grant to attend AAAI and EAAI, 2/20

"Spineful Communication" workshop on body language, 1/6/17

Flipped classroom workshop at CATLR, 1/26/16

Published Games

Choice of Magics (2018) - rated 92% positive on Steam
`https://store.steampowered.com/app/918380/Choice_of_Magics/`

Choice of Alexandria (2016) - rated 96% positive on Steam
`http://store.steampowered.com/app/466430/`

Choice of Robots (2014) - rated "overwhelmingly positive" (97%) on Steam
Nominated for Best Game, Best NPCs, Best Individual NPC, 2014 XYZZY awards
`http://store.steampowered.com/app/339350/`

Popular Articles

"AI as Plastic: Useful, Cheap, Fragile." K. Gold, CDS Views and Voices, 6/16/23.

"The Leaky Nature of Online Privacy." K. Gold, Slate.com, 8/29/11.

"Norvig versus Chomsky and the Fight for the Future of AI." K. Gold, Tor.com, 6/21/11.

"Watson Wins, but So Does Humanity." K. Gold, Tor.com, 2/17/11.

"Why Watson on Jeopardy is AI's Moon Landing Moment." K. Gold, Tor.com, 2/16/11.

Patents

Frame compression using differential codes and an escape code. U. S. Patent #6987807. Inventor Kevin C. Gold; assignee, Seiko Epson Corporation. Awarded 1/17/2006.

Frame compression using radix approximation. U. S. Patent #6937652. Inventor Kevin C. Gold; assignee, Seiko Epson Corporation. Awarded 8/30/2005.

Automatic generation of program logic to decode variable-length codes. U. S. Patent #6563441. Inventor Kevin C. Gold; assignee, Seiko Epson Corporation. Awarded 5/13/2003.

Committees

CDS Pedagogical Advancement Committee (planned), 2026-
CDS Misconduct Committee, 2024-2025
CDS Academic Policy Committee, 2022-2023
CDS NTT Hiring Committee, 2021-2022
NEU Undergraduate Curriculum Committee, 2018-2021
NEU FTNTT hiring committee, 2017-2021
NEU Master's curriculum committee, 2017-2018
NEU committee to review CCIS first year math courses and requirements, 2017-2018
NEU Programming Design Paradigms course review committee, 2016-2017.
NSF Medium-Size Data Mining, 2011.
AIIDE program committee, 2011,2013-2014.
RIT College of Computing Curriculum Committee, 2010–2011.
RIT Graduate Council, 2010–2011.
International Conference on Development and Learning (ICDL) program committee, 2010.
FLAIRS special track on games and entertainment, 2010. **Co-chair.**
FLAIRS general program committee, 2010.
Teaching Fellow Oversight Committee, Yale Department of Computer Science, 2007–2008.

Reviewer Experience

- Artificial Intelligence Review
- Artificial Intelligence in Interactive Digital Entertainment (AIIDE)
- Technical book reviewer for Wiley
- Technical book reviewer for Pearson
- IEEE Transactions on Man, Systems, and Cybernetics
- International Conference on Development and Learning (ICDL)
- Annual Meeting of the Cognitive Science Society (CogSci)
- International Journal of Humanoid Robotics (IJHR)
- International Joint Conference on Neural Networks (IJCNN)
- International Conference on Robotics and Automation (ICRA)
- Human Robot Interaction (HRI)
- Robotica special issue on Self-X systems
- IEEE Transactions on Computational Intelligence and AI in Games (TCIAIG)

Other External Service

- Program chair, AIET 2026
- Session chair, AIET 2025[1]
- Session chair, AIET 2024[2]

[1]Best-in-session was awarded by a different session chair.
[2]Best-in-session was awarded by a different session chair.