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|  | |  | Catherine Havasi  Luminoso  675 Massachusetts Ave  Cambridge, MA 02139 - USA T: (617) 901-8577 E: [havasi@luminoso.com](mailto:havasi@luminoso.com) |
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| Employment | |  | **Luminoso**, Cambridge, Massachusetts USA Chief Strategy Officer, February 2018 – Present Co-founder and CEO, December 2010 – February 2018**Massachusetts Institute of Technology**, Cambridge, Massachusetts USAResearch Affiliate, MIT Media Lab, July 2013 – September 2016 Research Scientist and Director of Digital Intuition, MIT Media Lab, May 2011 – July 2013 |
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| Education | |  | **Brandeis University**, Waltham, Massachusetts USA Ph.D., Computer Science, June 2009   * Thesis: Discovering Semantic Relations Using Singular Value Decomposition * Adviser: Professor James Pustejovsky * Areas of Study: Computational linguistics, machine learning, and lexical resources  **Massachusetts Institute of Technology**, Cambridge, Massachusetts USA Postdoc, MAS, July 2009 - May 2011  Research Affiliate, March 2006 – July 2009  M.Eng., Computer Science, Spring 2004   * Thesis: Bayesian Modeling of Manner and Path Psychological Data * Advisers: Professors Robert Berwick and Jesse Snedeker * Areas of Study: Cognitive modeling, Bayesian learning, and child language development * S.B., Computer Science and Computer Engineering, Spring 2003 |
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| Selected Publications | |  | **[1]** Catherine Havasi, Robert Speer, James Pustejovsky, and Henry Lieberman. *Digital Intuition: Applying Common Sense Using Dimensionality Reduction*. IEEE Journal of  Intelligent Systems, July 2009.  **[2]** Robert Speer, Catherine Havasi, and Henry Lieberman. *AnalogySpace: Reducing the dimensionality of common sense knowledge. Proceedings of AAAI 2008*, July 2008.  **[3]** Catherine Havasi, Robert Speer, and Jason Alonso. *ConceptNet 3: a flexible, multi-lingual semantic network for common sense knowledge*. In Recent Advances in Natural Language Processing, Borovets, Bulgaria, September 2007. |
| Additional Peer-Reviewed Publications | |  | **[1]** Speer, Robert, Joshua Chin, and Catherine Havasi. "ConceptNet 5.5: An Open Multilingual Graph of General Knowledge." In AAAI, pp. 4444-4451. 2017.  **[2]** Shafto, Carissa L., Catherine Havasi, and Jesse Snedeker. "On the plasticity of semantic generalizations: Children and adults modify their verb lexicalization biases in response to changing input." Developmental psychology 50, no. 3 (2014): 794.  **[3]** Hayden, Kasia, Dan Novy, Catherine Havasi, Michael Bove, Santiago Alfaro, and Rob Speer. "Narratarium: An immersive storytelling environment." In International Conference on Human-Computer Interaction, pp. 536-540. Springer, Berlin, Heidelberg, 2013.  **[4]** Havasi, Catherine, Erik Cambria, Björn Schuller, Bing Liu, and Haixun Wang. "Statistical Approaches to Concept-Level Sentiment Analysis." IEEE Intelligent Systems 28, no. 3 (2013): 0006-9.  **[5]** Speer, Robert, and Catherine Havasi. "*ConceptNet 5: A large semantic network for relational knowledge*." In The People’s Web Meets NLP, pp. 161-176. Springer Berlin Heidelberg, 2013.  **[6]** Speer, Robert, and Catherine Havasi. "*Representing General Relational Knowledge in ConceptNet 5*." In LREC, pp. 3679-3686. 2012.  **[7]** Havasi, Catherine, Richard Borovoy, Boris Kizelshteyn, Polychronis Ypodimatopoulos, Jon Ferguson, Henry Holtzman, Andrew Lippman, Dan Schultz, Matthew Blackshaw, and Greg Elliott. "*The glass infrastructure: Using common sense to create a dynamic, place-based social information system.*" AI Magazine 33, no. 2 (2012): 91.  **[8]** Dinakar, Karthik, Birago Jones, Catherine Havasi, Henry Lieberman, and Rosalind Picard. "*Common sense reasoning for detection, prevention, and mitigation of cyberbullying*." ACM Transactions on Interactive Intelligent Systems (TiiS) 2, no. 3 (2012): 18  **[9]** Gold, Kevin, Catherine Havasi, Michael Anderson, and Kenneth C. Arnold. "*Comparing Matrix Decomposition Methods for Meta-Analysis and Reconstruction of Cognitive Neuroscience Results*." In FLAIRS Conference. 2011.  **[10]** Havasi, Catherine, Robert Speer, and Justin Holmgren. "*Automated color selection using semantic knowledge*." Proceedings of AAAI CSK, Arlington, USA 2, no. 9 (2010).  **[11]** Speer, Robert, Catherine Havasi, and Harshit Surana. "*Using Verbosity: Common Sense Data from Games with a Purpose*." In FLAIRS Conference. 2010.  **[12]** Cambria, Erik, Robert Speer, Catherine Havasi, and Amir Hussain. "Senticnet: *A publicly available semantic resource for opinion mining*." Artificial Intelligence (2010): 14-18.  **[13]** Speer, Robert H., Catherine Havasi, K. Nichole Treadway, and Henry Lieberman. "*Finding your way in a multi-dimensional semantic space with Luminoso*." In Proceedings of the 15th international conference on Intelligent user interfaces, pp. 385-388. ACM, 2010.  **[14]** Speer, Robert, Catherine Havasi, Nichole Treadway, and Henry Lieberman. "*Visualizing common sense connections with Luminoso*." In Proceedings of the first international workshop on Intelligent visual interfaces for text analysis, pp. 9-12. ACM, 2010.  **[15]** Havasi, Catherine, Jason B. Alonso, and Robert Speer. "*Reducing the Dimensionality of Data Streams using Common Sense*." In Collaboratively-Built Knowledge Sources and AI. 2010.  **[16]** Hayden, Kasia, Dan Novy, Catherine Havasi, Michael Bove, Santiago Alfaro, and Rob Speer. "*Narratarium: An Immersive Storytelling Environment*." In HCI International 2013-Posters’ Extended Abstracts, pp. 536-540. Springer Berlin Heidelberg, 2013.  **[17]** Alonso, Jason Bernardino, Kenneth C. Arnold, and Catherine Havasi. "*Envisioning a Robust, Scalable Metacognitive Architecture Built on Dimensionality Reduction*." In Metacognition for Robust Social Systems. 2010.  **[18]** Speer, Rob, Kenneth Arnold, and Catherine Havasi. "*Divisi: Learning from semantic networks and sparse SVD." In Proc*. 9th Python in Science Conf.(SCIPY 2010). 2010.  **[19]** Havasi, Catherine, Robert Speer, Kenneth C. Arnold, Henry Lieberman, Jason B. Alonso, and Jesse Moeller. "*Open Mind Common Sense: Crowd-sourcing for Common Sense*." In Collaboratively-Built Knowledge Sources and AI. 2010.  **[20]** Catherine Havasi, Robert Speer and James Pustejovsky. *Coarse Word-Sense Disambiguation Using Common Sense*. Proceedings of the AAAI 2010 Symposium on Common Sense Knowledge.  **[21]** Catherine Havasi, Robert Speer and Justin Holmgren. *Automated Color Selection*  *Using Semantic Knowledge*. To appear in the Proceedings of the AAAI 2010 Symposium on Common Sense Knowledge.  **[22]** Erik Cambria, Robert Speer and Catherine Havasi. *SenticNet: a Publicly Available*  *Semantic Resource for Opinion Mining*. To appear in the Proceedings of the AAAI  2010 Symposium on Common Sense Knowledge.  **[23]** Catherine Havasi, Robert Speer, and Jason Alonso*. Reducing the Dimensionality of Data Streams using Common Sense*. Proceedings of the 2010 Workshop on Collaboratively-built Knowledge Sources and Artificial Intelligence.  **[24]** Jason Alonso, Kenneth Arnold, and Catherine Havasi. *Envisioning a Robust, Scalable Metacognitive Architecture Build on Dimensionality Reduction*. Proceedings of  2010 AAAI Workshop on Meta-Cognition.  **[25]** Robert Speer, Catherine Havasi, and Harshit Surana *Using Verbosity: Common Sense Data from Games with a Purpose*. Proceedings of the 23rd International FLAIRS Conference, May 2010.  **[26]** Robert Speer, Catherine Havasi, Nichole Treadway, and Henry Lieberman*. Finding Your Way in a Multi-dimensional Semantic Space with Luminoso*. In Proceedings of  Intelligent User Interfaces, January 2010.  **[27]** Erik Cambria, Amir Hussain, Catherine Havasi, and Chris Eckl. *AffectiveSpace:*  *Blending Common Sense and Affective Knowledge to Perform Emotive Reasoning*. Workshop on Opinion Mining and Sentiment Analysis, November 2009.  **[28]** Catherine Havasi, Robert Speer, and James Pustejovsky. *Automatically Suggesting Semantic Structure for a Generative Lexicon Ontology*. Proceedings of Generative  Lexicon, September 2009.  **[29]** Catherine Havasi, Robert Speer, James Pustejovsky, and Henry Lieberman. *Digital*  *Intuition: Applying Common Sense Using Dimensionality Reduction.* IEEE Journal of  Intelligent Systems, July 2009.  **[30]** Jason Alonso, Catherine Havasi, and Henry Lieberman. *PerspectiveSpace: Opinion*  *modeling with dimensionality reduction.* User Modeling, Adaption, and Personalization (UMAP), June 2009.  **[31]** Robert Speer, Jayant Krishnamurthy, Catherine Havasi, Dustin Smith, Kenneth  Arnold, Henry Lieberman. *An interface for targeted collection of common sense knowl-*  *edge using a mixture model*. In Proceedings of Intelligent User Interfaces, February  2009.  **[32]** Catherine Havasi, Robert Speer, and Jason Alonso. *ConceptNet: A lexical resource*  *for common sense knowledge*. In Recent Advances in Natural Language Processing, Volume 5. John Benjamins Publishers, Amsterdam & Philadelphia, 2009.  **[33]** Robert Speer, Catherine Havasi, and Henry Lieberman. *AnalogySpace: Reducing*  *the dimensionality of common sense knowledge*. Proceedings of AAAI 2008, July 2008.  **[34]** Catherine Havasi, Robert Speer, and Jason Alonso. *ConceptNet 3: a flexible, multi-lingual semantic network for common sense knowledge*. In Recent Advances in Natural  Language Processing, Borovets, Bulgaria, September 2007.  **[35]** Catherine Havasi, James Pustejovsky, and Anna Rumshisky. *An evaluation of the*  *Brandeis Semantic Ontology*. In Proceedings of the Fourth International Workshop  on Generative Approaches to the Lexicon, Paris, France, 2007.  **[36]** Ben Wellner, James Pustejovsky, Catherine Havasi, Roser Sauri and Anna  Rumshisky. *Classification of Discourse Coherence Relations: An Exploratory Study*  *using Multiple Knowledge Sources*. In Proceedings of the Special Interest Group on  Discourse and Dialogue 2006, Sydney, Australia, 2006.  **[37]** James Pustejovsky, Catherine Havasi, Jessica Littman, Roser Sauri, Anna Rumshisky, and Marc Verhagen. *Towards a generative lexical resource: The Brandeis*  *Semantic Ontology*. Proceedings of the Fifth Language Resource and Evaluation Conference, 2006.  **[38]** Catherine Havasi, James Pustejovsky, and Marc Verhagen. *BULB: A Unified Lexical Browser*. Proceedings of the Fifth Language Resource and Evaluation Conference, 2006.  **[39]** Anna Rumshisky, Patrick Hanks, Catherine Havasi, James Pustejovsky. *Constructing a Corpus-based Ontology using Model Bias*. Proceedings of The Florida Artificial Intelligence Research Society Conference, 2006.  **[40]** Catherine Havasi and Jesse Snedeker. *Investigation of the Development and Plasticity of the Manner-Path Lexicalization Bias in English Speaking Adults and Children*. Proceedings of the International Association for the Study of Child Language, 2005.  **[41]** Robert Speer and Catherine Havasi. *Meeting the Computer Halfway: Language Processing in the Artificial Language Lojban*. Proceedings of the Student Oxygen Workshop, 2005.  **[42]** Catherine Havasi and Jesse Snedeker. *The Adaptability of the Manner-Path bias in*  *Children*. Proceedings of the BU Child Language Development Conference, 2004.  **[43]** Catherine Havasi and Jesse Snedeker. *The Adaptability of Language Specific Verb Lexicalization Biases*. Proceedings of Cognitive Science Society Conference, 2004. |
| Awards and Etc. | |  | * **Recent Advances in Natural Language Processing, Xerox award for best student paper on semantic processing,** 2007 * **NSF Graduate Research Fellowship**, 2004 * **First to use crowd-sourcing for artificial intelligence** * **Guest Editor**: IEEE Intelligent Systems, ACM Transactions on Interactive Intelligent Systems, O'Reilly, Elsevier * **Organizing committee, NAACL 2015** * **Several technology patents** * **Major non-academic speaking:** SXSW, TTI Vanguard, TMRE, State Department, ACT-IAC, Strange Loop, Digital Shoreditch **Upcoming:** Poptech, World Economic Forum Academy * **Founding organizer committee member of Boston Data Week** * **Numerous academic conference and workshop chairs, program committees, and reveiws** |
| Major Non-profit work | |  | **Learning Unlimited**  A non-profit which enables college students to run outreach programs for middle and high school students.   * Founding member, board of directors Spring 2009 – December 2011 * Director of Development and Corporate Relations Spring 2009 – December 2010 |