Jesse Hostetler

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Education

- **Oregon State University** — Corvallis, OR
  Ph.D. Computer Science — 2017
  - Advised by Thomas Dietterich and Alan Fern
  - Dissertation: Monte Carlo Tree Search with Fixed and Adaptive Abstractions
  - Relevant coursework: Machine learning, planning and reinforcement learning, probabilistic graphical models, computer vision, statistical inference, deep learning
- **University of Nebraska-Lincoln** — Lincoln, NE
  B.S. Computer Science and Psychology — 2009

Experience

- **Oregon State University** — Corvallis, OR
  Graduate Research Assistant (PIs: Thomas Dietterich & Alan Fern) — Fall 2010 - Spring 2017
  - Designed, analyzed, implemented, and evaluated novel Monte Carlo tree search algorithms.
  - Applied online planning algorithms to mitigate blackouts in simulated power grids.
  - Designed and implemented a dynamic Bayesian network model of opening strategy in the video game *Starcraft*. Trained and evaluated the model on logs of expert gameplay.
- **Smart Information Flow Technologies** — Minneapolis, MN
  Intern — June 2009 - June 2010
  - Modeled satellite task scheduling and threat scenarios in a planning description language.
  - Built a prototype system for remote monitoring of human physiological responses to subliminal cues. Developed into US Patent 9390627 B1.
  - Wrote data cleaning and analysis scripts for a study of behavior-based user authentication.
- **University of Nebraska-Lincoln** — Lincoln, NE
  Undergraduate Research Assistant (PI: Leen-Kiat Soh) — Fall 2007 - Spring 2009
  - Designed and implemented interactive computer science education software.
  - Developed software for capturing user interaction data from web-based educational activities.
  - Implemented a point-and-click editor for creating Flash-based instructional software.

Skills

- Experienced in the analysis, implementation, and empirical evaluation of machine learning and sequential decision-making algorithms
- Strong technical writing and oral presentation skills
- Programming languages: C++, Java, Python; some Matlab, R, SQL
- Computer skills: Linux and Windows environments, LaTeX, version control (Git, SVN)

Publications

Conference/Journal:

1. **J. Hostetler**, A. Fern, & T. Dietterich (submitted). Monte Carlo tree search with fixed and adaptive state abstractions.
2. **J. Hostetler**, A. Fern, & T. Dietterich (2015). Progressive abstraction refinement for sparse sampling. *Conf. on Uncertainty in AI (UAI).*
3. **J. Hostetler**, A. Fern, & T. Dietterich (2014). State abstraction in Monte Carlo tree search. *AAAI Conf. on Artificial Intelligence.*
4. B. King, A. Fern, & **J. Hostetler** (2013). On adversarial policy switching with experiments in real-time strategy games. *Int'l Conf. on Automated Planning and Scheduling (ICAPS).*
5. **J. Hostetler**, E. Dereszynski, T. Dietterich, & A. Fern (2012). Inferring strategies from limited reconnaissance in real-time strategy games. *Conf. on Uncertainty in AI (UAI).*
6. E. Dereszynski, **J. Hostetler**, A. Fern, T. Dietterich, T.T. Hoang, & M. Udarbe (2011). Learning probabilistic behavior models in real-time strategy games. *AAAI Conf. on AI in Design and Entertainment (AIIDE).*
7. G. Nugent, K. Kupzyk, S. Riley, L.D. Miller, **J. Hostetler**, L-K. Soh, & A. Samal (2009). Empirical usage metadata in learning objects. *ASEE/IEEE Frontiers in Education Conference.*

Workshop:

8. B. King, A. Fern, & **J. Hostetler** (2012). Adversarial policy switching with application to RTS games. *AIIDE Workshop on Adversarial Real-time Games.*

Unrefereed:

9. D. Kortenkamp, P. Bonasso, D. Musliner, M. Pelican, & **J. Hostetler** (2011). Embedding planning technology into satellite systems. *AIAA Infotech@Aerospace Conference.*

Awards

- ARCS Caron & Larry Ogg Scholarship 2010-2013
- Undergraduate Creative and Research Experience (UCARE) Grant 2008-2009
- National Merit Scholarship 2005-2009

Professional Service

- Program committee member: AAAI (2014), UAI (2016, 2017), ICAPS (2017)
- Reviewer for: *Journal of AI Research* (2012, 2016), *Machine Learning* (2016, 2017)
- Member of the Oregon State University EECS Dept. Graduate Committee, 2015-2017