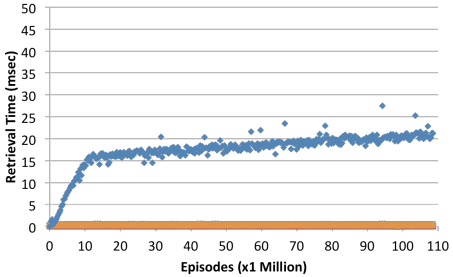
Reflections on CS Research in Industry

Prof. Nate Derbinsky

Research Interests

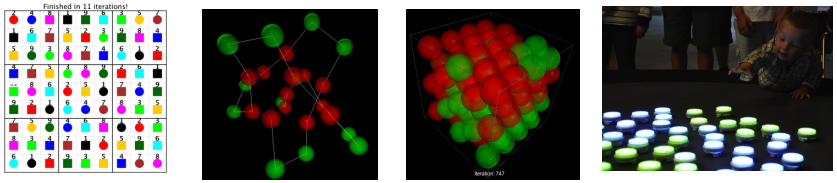
Cognitive Systems

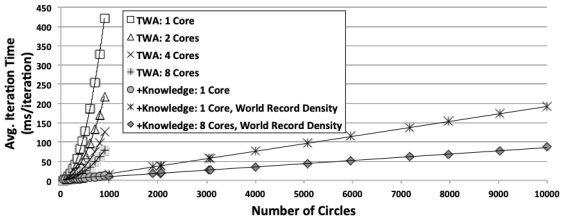


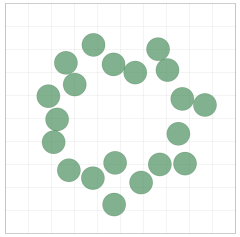




Scalable Optimization



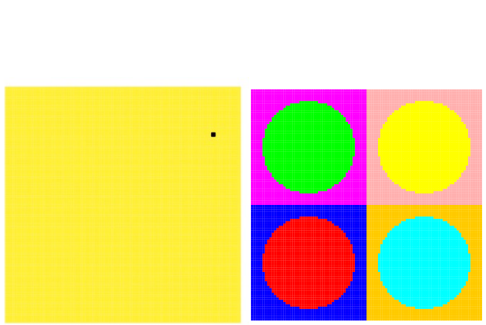


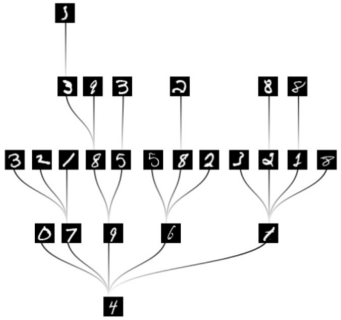


AI Applications/Education



Online ML





Teaching

K-12/ICT-D











UG/Grad

- CS1-4
  - Foundations, OOP, SE
- Databases, Web
- AI, Machine Learning
  - Projects, Practicum
- HTMAA
  - RPi, Arduino

My Path to Khoury @ Northeastern

1998-2009 **BitX Solutions, Inc.** Founder & President
- {.gov .edu .org .com} x {desktop web mobile}

2002-2006 **NC State.** BS Computer Science
- TA, DBMS

2006-2012 **U of Michigan.** MS/PhD Comp Sci and Eng
- TA, AI+DBMS

2012-2014 **Disney Research.** Postdoctoral Associate
- Machine Learning, Optimization, Robotics

2014-2017 **Wentworth.** Assistant Professor
- 3-3, Research/Service Learning


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6
Calgary
Winnipeg
ONTARIO
QUEBEC
Seattle
Spokane
WASHINGTON
Portland
MONTANA
NORTH DAKOTA
MINNESOTA
Minneapolis
Bozeman
Billings
SOUTH DAKOTA
WISCONSIN
MICHIGAN
Ottawa
OREGON
Boise
IDAHO
Salt Lake City
NEBRASKA
Omaha
IOWA
Chicago
Denver
United States
NEVADA
UTAH
COLORADO
KANSAS
Kansas City
ILLINOIS
INDIANA
OHIO
St. Louis
Indianapolis
Cincinnati
Philadelphia
Washington
Sacramento
San Francisco
San Jose
CALIFORNIA
Las Vegas
MISSOURI
WEST VIRGINIA
KENTUCKY
Nashville
TENNESSEE
Memphis
Albuquerque
OKLAHOMA
ARKANSAS
Los Angeles
ARIZONA
NEW MEXICO
Atlanta
MISSISSIPPI
ALABAMA
GEORGIA
San Diego
Phoenix
Dallas
Tucson
Ciudad Juárez
TEXAS
Jacksonville
Bermuda
BAJA CALIFORNIA
SONORA
CHIHUAHUA
San Antonio
Houston
Orlando
Tampa
FLORIDA
Miami
COAHUILA
NUEVO LEON
Monterrey
Gulf of California
BAJA CALIFORNIA SUR
SINALOA
DURANGO
TAMAULIPAS
Mexico
Gulf of Mexico
The Bahamas
Havana
FT Teaching Faculty (110)

polycog

- Incorporated April 2026
- Mission: *Become the 'Intel Inside' of autonomous agents: the universal cognitive architecture powering every enterprise and customer agent*

* currently on sabbatical



Thoughts re: Research in Industry

- Time budget: research, $/reporting…
- Degrees of freedom: manager, funder, …

- Level of secrecy: NDA, clearance, …
- What impact looks like: basic, applied, …
- Resourcing: data, compute, team, $, …

Thank You!! :)

Questions?

Nate Derbinsky

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https://derbinsky.info

https://polycog.ai

