



# AI at the University of Memphis



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**RESEARCH**  
+ INNOVATION



## AI Initiatives at UofM

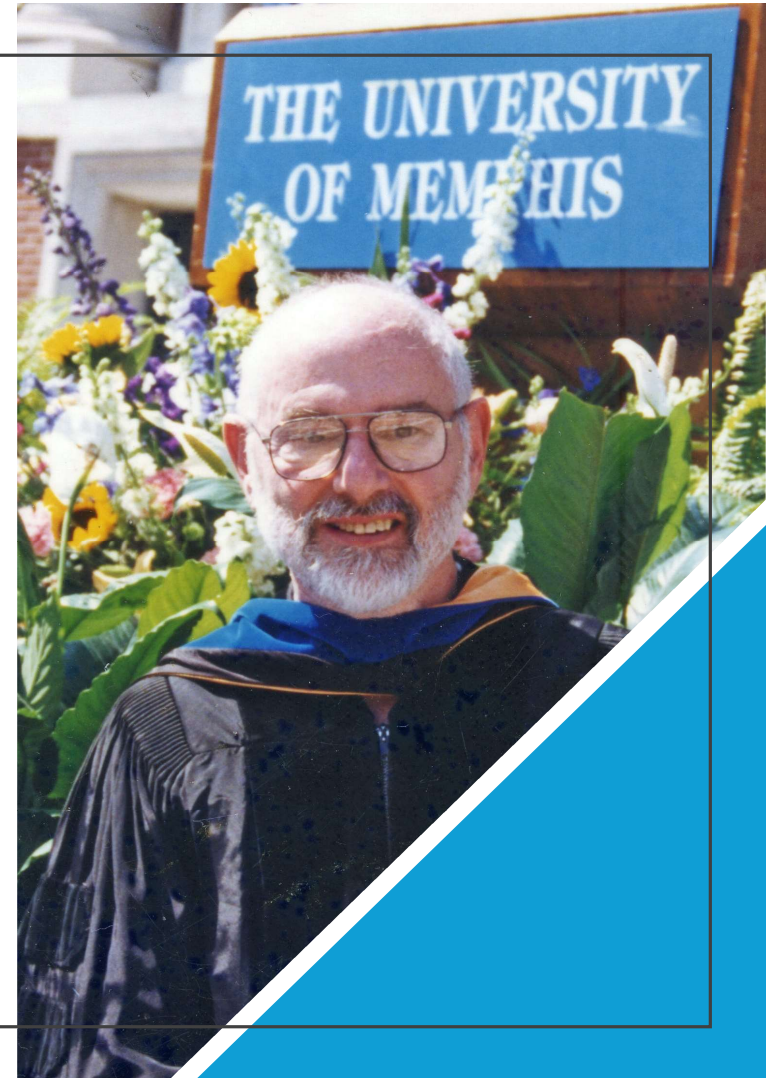
- 901 AI
- International AI research exchange with Universitat Autònoma de Barcelona and the Institute of European Studies
- AI in Next Generation Supply Chain Research
- FedEx Institute of Technology AI training
- Team Science Team building
  - AI Grant Collaborative Initiative
  - Educate AI
- \$1 Million dollar investment to support xAI in Memphis
- HPC core

- The 901 AI Meetup is a vibrant community gathering for AI enthusiasts in the Memphis area.
- At these meetups, participants engage in insightful discussions on the latest AI advancements, share innovative projects, and explore potential collaborations.



# Stan Franklin

- Early pioneers of the concept of “Artificial Consciousness”
- Founder of Institute for Intelligent Systems (IIS) – Known for Coh-metrix

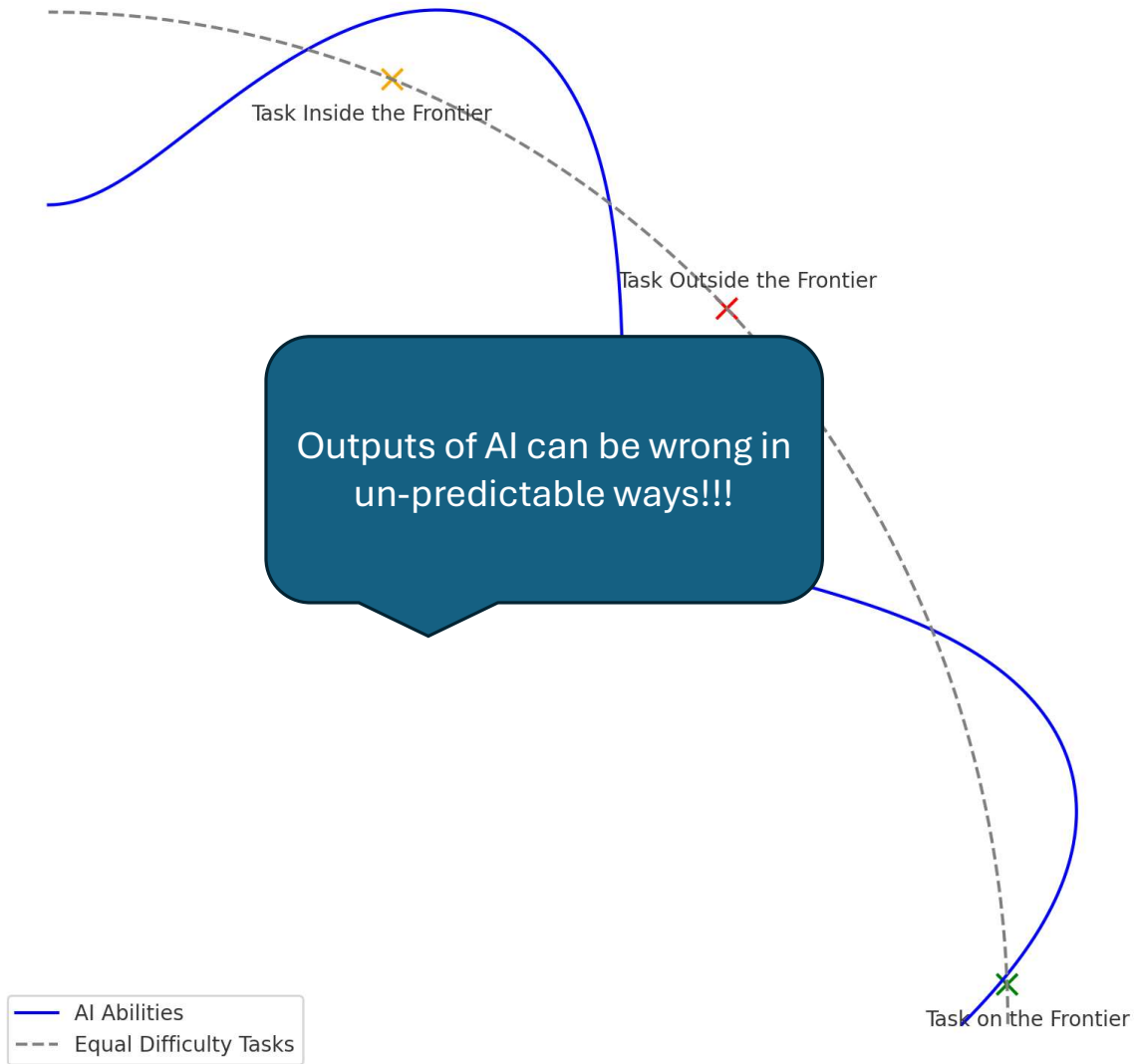




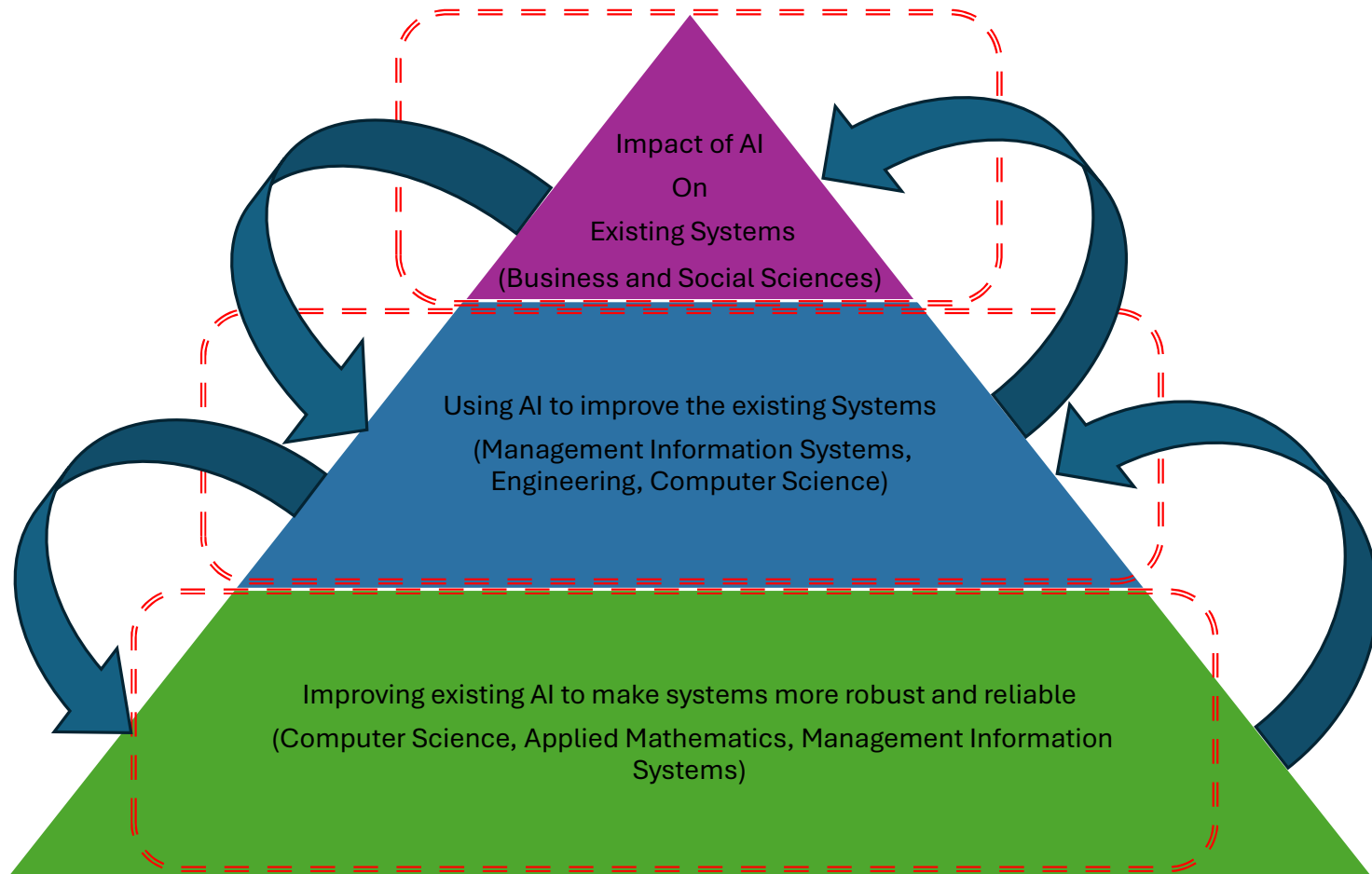
# Arthur Graesser

- Knowledge Representation in Computers
- Intelligent Tutoring Systems

# Jagged Frontier of AI Capabilities



# Pyramid of AI Research



Improving existing AI to make  
systems more robust and reliable





# Xiaolei Huang (Computer Science)

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- Robustness of Text Models
- Applications of NLP and ML to public health issues such as vaccination, alcoholism, mental health etc
- 3 to 4 NVIDIA A100




# Deepak Venugopal (Computer Science)

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- Developing Fast, Scalable and Accurate Algorithms for Inference
  
- 2 or 3 NVIDIA A100



# Using AI to improve existing Systems



# Chrysante Preza (Electrical Engineering)

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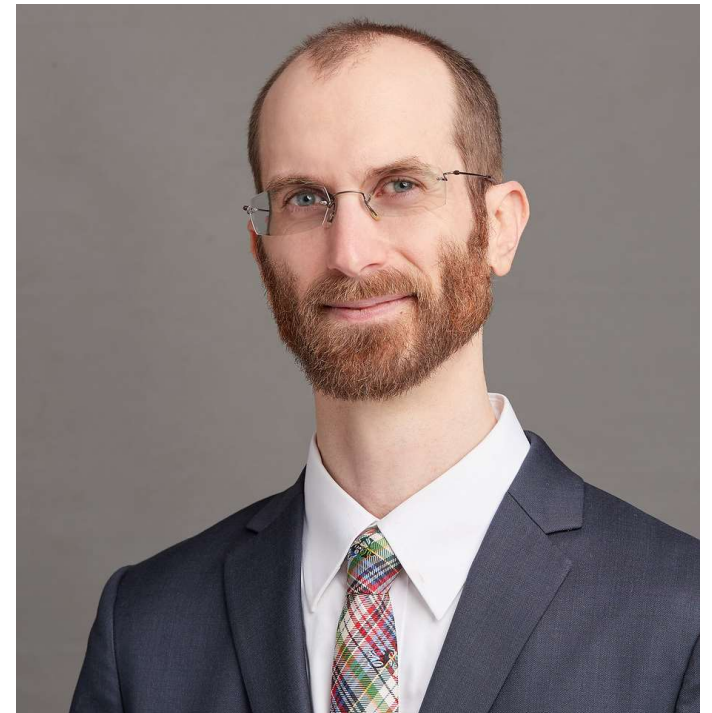
- Illumination Microscopy using Neural Networks
- Computational Imaging
- NVIDIA RTX (Formerly NVIDIA GRID)



# Andrew Olney (Mathematics)

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- Intelligent Tutoring Systems – Using Deep Learning and NLP for QA Generation from Textbooks
- Creating learning materials for programming and Data Science using mixtures of Text and Code.
- NVIDIA A100 80GB



# Vasile Rus (Computer Science)

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- AI-driven Intelligent Tutoring Systems
- 8 to 10 NVIDIA A100 80GB and 20 TB HD Space



# Sabyasachee (Sabya) Mishra (Civil Engineering)

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- Improving safety of transportation networks using AI
- Utilization of computer vision to detect and track vehicles
- NVIDIA H100 32GB



# Impact of AI on Existing Systems





# Srikar Velichety

## (Management Information Systems)

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- Impact of Generative AI on the market value of open-source knowledge repositories
- Impact of algorithmic control on Employee Well being in distribution centers
- Using multi-layer neural networks for poverty prediction
- 2 to 3 NVIDIA A100 80GB



# Huigang Liang

## (Management Information Systems)

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- Impact of AI Investments on Supply Chain Resilience and Data Security
- Using AI to detect mental disorders
- NVIDIA H100 32GB



# Pankaj K. Jain

## (Finance, Insurance and Real Estate)

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- Portfolio research with and without AI
- Pros and Cons for investor behavior with and without AI
- NVIDIA H100 32GB





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**RESEARCH &**  
INNOVATION

