

Aspiring PI Info:

- Name: Yu Wang
- Position/Title: Assistant Professor
- Affiliation: University of Florida



Research interests

I am generally interested in the synergy between formal methods and heuristic approaches. My focus is on:

- Empowering formal methods to address complex real-world problems
- Conversely, enhancing heuristic approaches by integrating the lessons from formal methods.

Current Project(s)

I work on several formal-method-related projects across different domains:

- Computer Engineering: Statistical model checking for evaluation of computer architectures.
- Autonomous Planning: Logic-guided safe reinforcement learning in contested environments.
- Data Mining: Logic-infused deep learning for spatiotemporal data analysis.

Project Idea(s)

- Idea: Formal verification/falsification of learning-enabled autonomy
- Impact on society/Who will benefit:
 - Enhanced interpretability
 - Guaranteed real-world safety
 - Alignment with human values
- Possible transition to practice:
 - Autonomous driving
 - Robotics/Embodied AI
- Education and Outreach:
 - Hands-on system building
 - Collaborative student teamwork
- Quantify impacts if possible
 - Application-based benchmarking
 - Adoption by academia and industry

Possible collaborators sought

- Theorem proving
- Machine learning
- Robotics, data science

