

NCSA Center for AI Innovation

Volodymyr Kindratenko

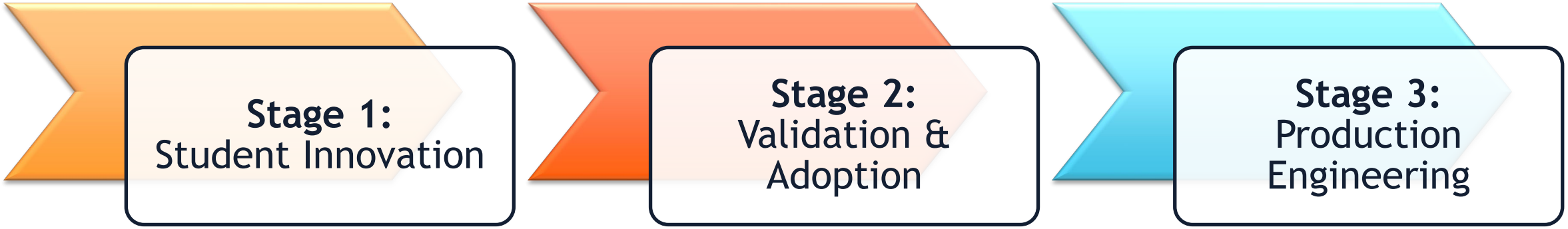
National Center for Supercomputing Applications
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

CAII: Connecting Research, Students, Industry, and Technology to Accelerate AI Impact

1. Discover (Research)
2. Develop (Students)
3. Partner (Industry)
4. Deploy (Technology)

- Bring together University AI research community for opportunities to collaborate
- Align academic research with industry challenges and opportunities
- Provide students with opportunities to learn and work in AI domain
- Deliver cutting-edge AI tools and capabilities to the board community

CAII Innovation Pipeline: From Student Ideas to Production Services



🎓 Graduate & Undergraduate Students

- Explore emerging technologies
- Rapid prototyping and experimentation
- Proof-of-concept development
- High-risk, high-reward ideas

🔬 CAII Research and Technical Leadership

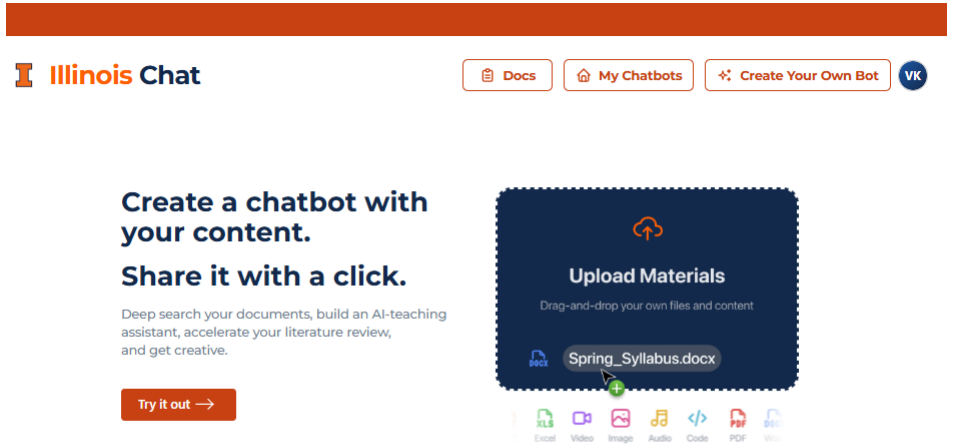
- Evaluate impact and feasibility
- Engage early adopters
- Define operational requirements
- Secure institutional support

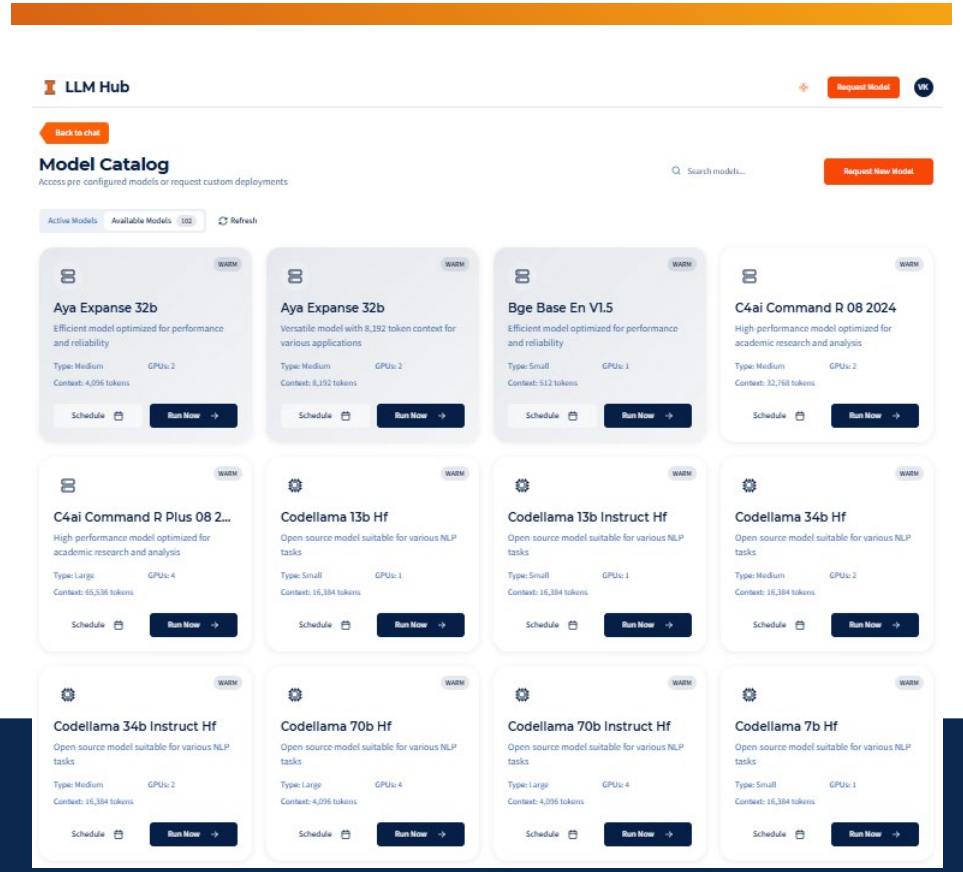
⚙️ Professional Software Development Team

- Robust architecture and security
- Scalability and reliability
- User support and documentation
- Long-term operations and maintenance

Two Example Success Stories

Student Prototype	Production Outcome
Illinois Chat began in 2022 as a student-led effort to develop an AI-powered teaching assistant for ECE courses at the University of Illinois.	The NCSA software engineering team assumed responsibility for the project in 2025, transforming the prototype into a scalable, production-grade service that supports the entire Illinois community.
LLMaaS (Large Language Model as a Service) began as a student's M.S. thesis project exploring how to host LLMs locally within an HPC environment constrained by the Slurm workload manager.	Professional software developers at NCSA subsequently transformed the prototype into a scalable, production-ready AI infrastructure supporting research and education across the University of Illinois.





Students drive innovation. Professional developers enable impact at scale.