LangGraph MCP Chatbot Challenge

Task

Build a general-purpose chatbot using LangGraph's MCP functionality with Tavily web search integration.

Requirements

Technical Stack

- LangGraph with MCP integration
- Tavily MCP for web search
- Frontend: CLI, AG UI, or Streamlit (your choice)

Resources

- LangGraph MCP Documentation
- AG UI Protocol
- Tavily MCP

Core Functionality

- Accept user text input
- Use Tavily web search when relevant
- Provide responses combining AI reasoning with search results
- Basic conversation flow

Code Standards

- Clean, readable code with meaningful names
- Proper project organization
- Comments for complex logic
- Basic error handling
- README with setup instructions

Constraints

- **Time Limit**: 5 hours maximum
- **Completion**: Partial completion is acceptable
- **Sources**: Use any open-source code (cite sources)

Deliverables

1. **Working Code**: Functional chatbot with clean codebase
2. **Development Log**: Bullet-point timeline of your planning and implementation process
3. **Demo**: Live demonstration with code walkthrough

Evaluation

- Technical implementation and MCP integration
- Code quality and organization
- Problem-solving approach (shown in development log)
- Ability to explain your work

Instructions

1. Start with research and planning
2. Build incrementally - simple first, then expand
3. Keep a development log as you work
4. Focus on core functionality over polish
5. Be ready to demo and explain your solution