Detailed Lab Structure & Student Expectations

Your Roadmap to LLM Programming Success

Part 1: Env. Setup (20 min)

Foundational

Objectives:
- Verify Python & env
- Install LiteLLM package
- Configure API keys securely
- Execute 1st successful API call

Key Activities:
- Step-by-step installation
- API key config & security
- "Hello World" API test
- Resolve common issues

Deliverable: Screenshot of API response

Part 2: API Mastery (30 min)

Core Skills

Objectives:
- Execute requests with diff. models
- Implement error handling
- Explore key parameters
- Compare provider outputs

Key Activities:
- Model comparison exercises
- Parameter experiments
- Error handling simulation
- Token usage & cost tracking

Deliverable: Python script with error handling

Part 3: Prompting (40 min)

Advanced Techniques

Objectives:
- Master zero-shot prompting
- Implement few-shot learning
- Practice chain-of-thought
- Design effective system messages

Key Activities:
- Prompt optimization challenges
- Task-specific prompting
- A/B test prompt effectiveness
- Creative applications

Deliverable: Portfolio of optimized prompts

Part 4: Applications (30 min)

Production Ready

Objectives:
- Build robust applications
- Manage context windows
- Apply cost optimization
- Create user-friendly interfaces

Key Activities:
- Mini-project development
- Performance optimization
- User experience design
- Deployment preparation

Deliverable: Complete application with docs

🏆 Success Metrics

Participation: Active engagement in exercises

Completion: Finish all four lab parts

Quality: Working, well-structured code

Creativity: Innovative use of techniques

🤝 Collaboration Policy

Encouraged: Help peers with tech issues

Share Insights: Discuss prompt strategies

Peer Learning: Form groups for challenges

Individual Work: Submit your own deliverables

🔄 Continuous Support

Instructor: Assistance throughout session

TA Support: For troubleshooting & guidance

Resources: Curated docs and tutorials

Office Hours: Post-lab extended help

🎆 Tips for Success

- Start early on setup issues
- Experiment freely with models
- Document your findings
- Ask lots of questions
- Have fun exploring LLMs!