**Project Timeline**

Initial Draft | DevForge

**Week 1: Foundation & Research**

* Setup: Create GitHub repo, setup Jira, define team roles, review requirements
* Tech Selection: Research about LLM (OpenAI/Hugging Face), MCP frameworks
* Architecture: Finalize a potential architecture for the project

**Week 2: Core Infrastructure**

* MCP Server: Start implementing server structure
* LLM Setup: Look into chosen LLM’s prompt engineering for task interpretation
* Command Framework: Basic OS detection

**Week 3: Tool Handlers Development**

* Software Installation: Package manager detection (apt/brew), version checking
* System Configuration: Environment variables, service status, port checking
* Development Tools: Git config, VS Code installation, SSH key management

**Week 4: Advanced Features & Integration**

* Container Tools: Docker installation, service management, user permissions
* Multi-step Tasks: Complex workflow handling with confirmation prompts
* Fault Tolerance: Comprehensive error handling, retry mechanisms, input validation

**Week 5: Testing & Refinement**

* Unit Testing: Test suites for each component and OS variations
* Integration Testing: Check cross-platform compatibility, workflows etc
* Optimization: Performance tuning, bug fixes, security enhancements

**Week 6: Documentation & UX**

* Documentation: README, architecture docs, API documentation
* Examples: Usage tutorials, troubleshooting guides
* UI Polish: Enhanced CLI interface, better error messages, progress indicators

**Week 7: Demo Preparation**

* Demo Scenarios: Design compelling demonstrations covering all tool types
* Final Testing: Fresh system testing (Linux/macOS), documentation validation
* Recording: Create backup demo video and presentation materials

**Week 8: Final Preparation & Presentation**

* Polish: Code cleanup, final documentation review, repository finalization
* Rehearsal: Practice demonstrations, prepare Q&A responses
* Presentation: Deliver live demo showcasing AI-powered automation

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**Success Criteria**

* 3+ automation categories (install, config, dev tools)
* Natural language processing with LLM integration
* Cross-platform compatibility (Linux/macOS)
* Safe execution with comprehensive error handling
* Complete documentation with justified tech choices
* Professional live demonstration