

### Prompt Architecture & Model Selection

- Hierarchical prompt design
- Multi-agent orchestration patterns
- LLM selection strategy (GPT-4 vs Claude vs SLMs)
- Token economics optimization
- Cost-performance trade-offs
- **Roles:** AI Solutions Architect, Senior Prompt Engineer, Knowledge Arch.

### Automated Deployment & Release

- Intelligent deployment strategy generation
- Progressive deployment patterns (canary, blue-green)
- Infrastructure provisioning & configuration
- Release orchestration & automation
- Deployment validation & rollback procedures
- Environment preparation & setup
- **Roles:** AI Engineer, AI Model Eng., AI Sec Eng., AI Ops Eng.

### Intelligent Quality Engineering

- Autonomous test generation
- Self-healing test suites
- Performance & security validation
- Quality gate automation
- **Roles:** Quality Orchestration Lead, AI Test Engineers

### AI-Orchestrated Development

- Multi-agent code generation
- Specialized agent coordination
- Integration & API generation
- Infrastructure as code creation
- **Roles:** AI Engineers, AI Orchestration Lead, AI Model Engineer

### Live Operations & Monitoring

- Real-time system health monitoring
- Autonomous incident response
- Performance optimization in production
- User behavior analytics collection
- Self-healing system management
- Operational intelligence gathering
- **Roles:** AI Engineers, AI Model Eng, AI Sec Eng, AI Data Specialist

### Discovery & Context Engineering

- Domain modeling & knowledge capture
- RAG architecture design
- Context repository creation
- Business rule extraction
- **Roles:** Context Engineers, Knowledge Architects

### Continuous Learning & Evolution

- Production feedback analysis
- Model fine-tuning decisions
- Prompt optimization from usage
- Knowledge base updates
- Cost-benefit rebalancing
- **Roles:** Token Economist, AI Model Eng., SRE, AI Data Specialist, AI Governance Specialist

