Security Automation - Enabling Developer Productivity

Job Requirement

> "Development of security automation tools to help software developers build faster and more securely"

Amazon's Automation Philosophy

- **Developer enablement**: Security tools that accelerate, not slow down, development
- **Scale-first design**: Solutions must work across thousands of services
- **AWS integration**: Leverage cloud-native security services
- **Measurable impact**: ROI, efficiency gains, risk reduction metrics

Core Capabilities Tested

- **Python scripting**: boto3, security APIs, data processing
- **AWS services integration**: Security Hub, GuardDuty, Config, Lambda
- **CI/CD pipeline design**: Automated security testing and deployment
- **Metrics and monitoring**: Security KPIs and business impact measurement

Contents

- `aws-security-automation.md` - boto3 scripts for security assessment
- `developer-security-tools.md` - Tools that help developers code securely
- `cicd-integration.md` - Security pipeline design and implementation
- `scaling-strategies.md` - Automation at Amazon scale (1000+ services)
- `roi-measurement.md` - Business impact and cost-benefit analysis

Key Interview Topics

- **Scenario**: "How would you automate security scanning for 1000 microservices?"
- **Coding**: Write security automation scripts during interview
- **Architecture**: Design scalable security systems using AWS services
- **Business justification**: ROI calculations and efficiency metrics

Practice Projects

1. **Multi-account security auditing** using AWS Organizations
2. **Automated vulnerability assessment** with parallel processing
3. **Security metrics dashboard** with real-time monitoring
4. **Developer security tools** with IDE integration

Success Criteria

- ☐ Can write AWS security scripts from scratch
- ☐ Understand automation at Amazon scale

- □ Calculate ROI and business impact
- □ Design developer-friendly security tools