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UNLEASH THE POWER OF LIMITLESS CONNECTIVITY
2021 Fall Technical Forum
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Security & Privacy

xGitGuard: ML-based Secret Scanner for GitHub

Bahman Rashidi

Sr. Security Architect
Comcast Cable

2021 Fall Technical Forum
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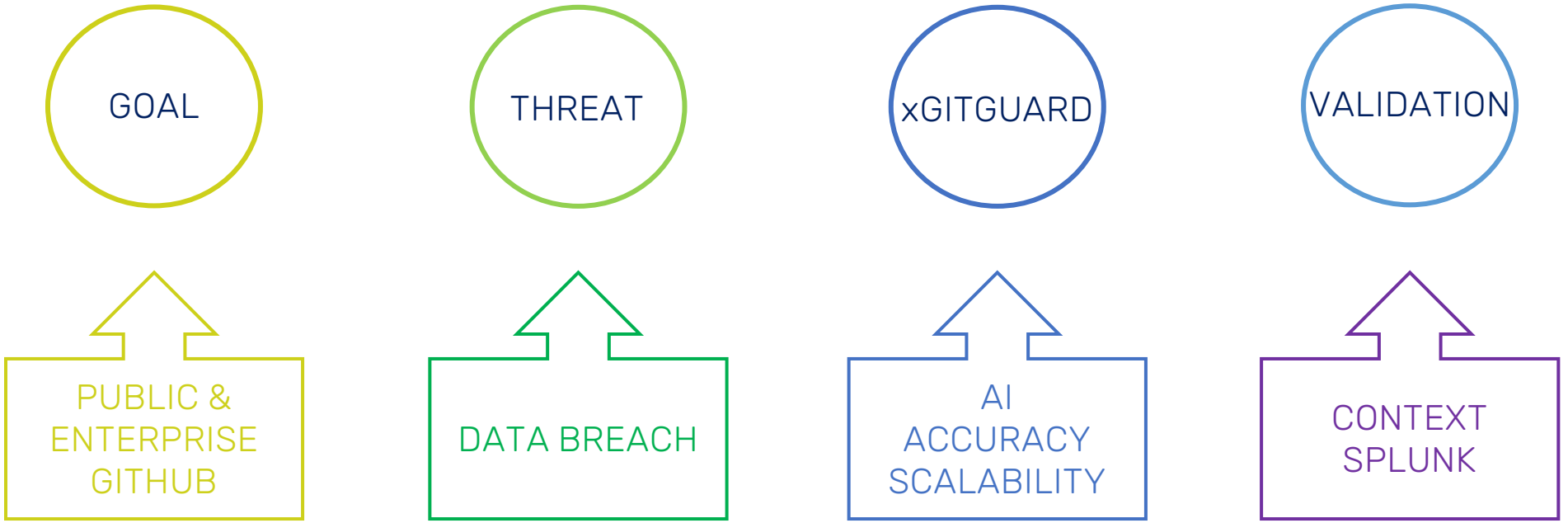
Overview



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Existing Approaches

- **TruffleHog**
  - Detect high-entropy text
- **Gitguardian**
  - Detects secrets using Regex classifiers
- **EarlyBird**
  - Detects specific patterns in files
- **NightWatch**
  - Entropy-based detection

Limitations with existing works:

- User decides the repos
- Regex-based detection
- Relying on entropy
- Scalability

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What Secrets?

CREDENTIALS

- Username & passwords
- Server credentials
- Account credentials
- etc.

TOKENS / KEYS

- Service API tokens (AWS, Azure, etc)
- Encryption keys
- etc.

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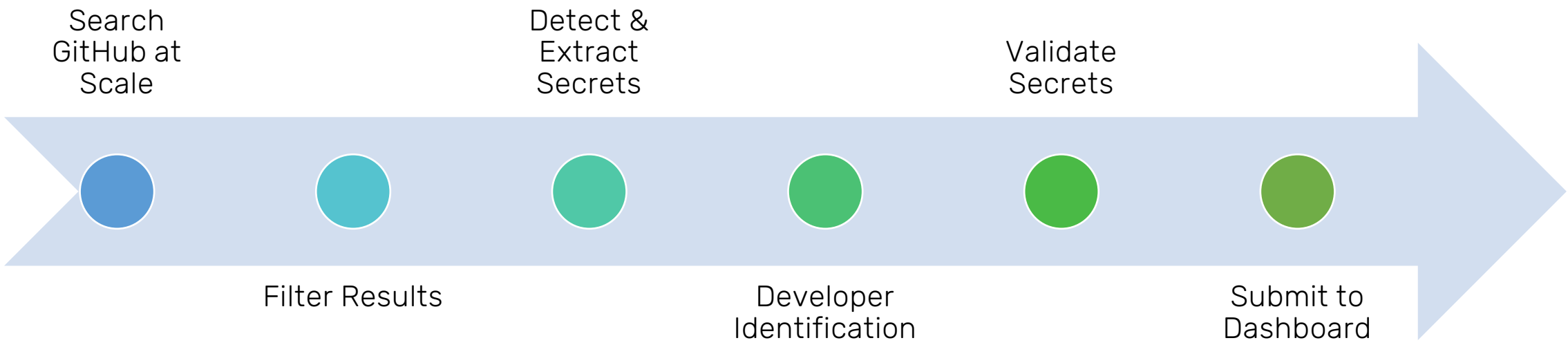
Overall Workflow



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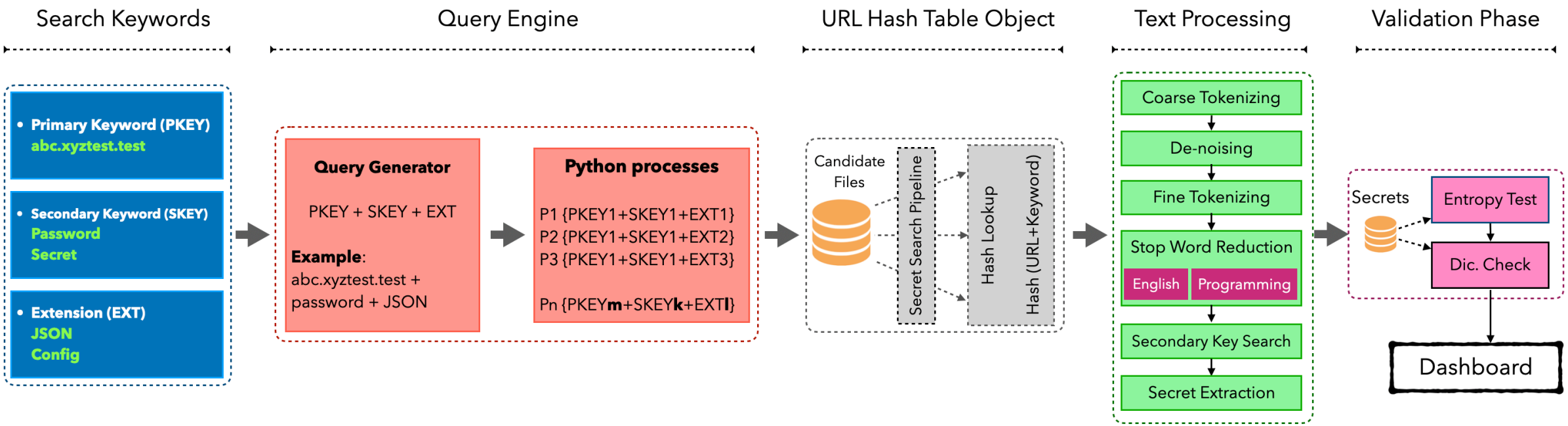
Credential Detection



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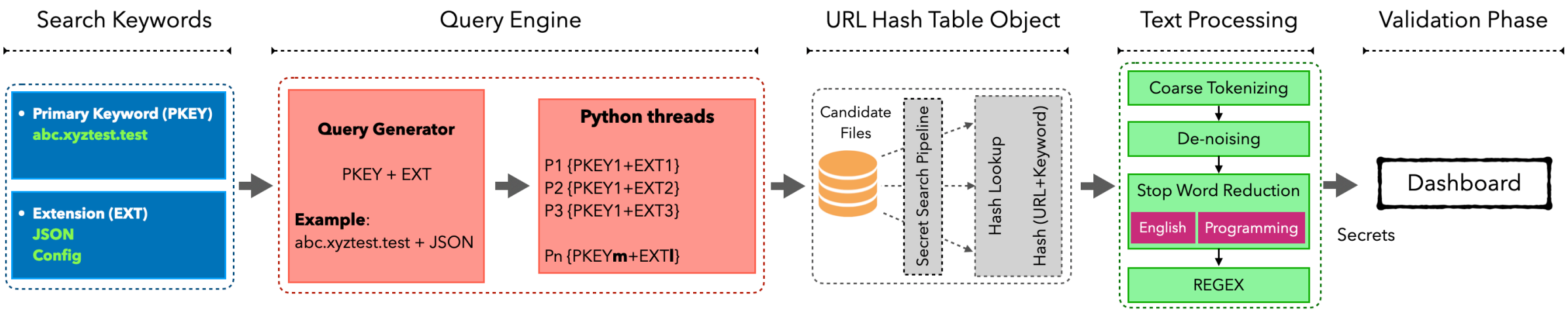
Token/Key Detection



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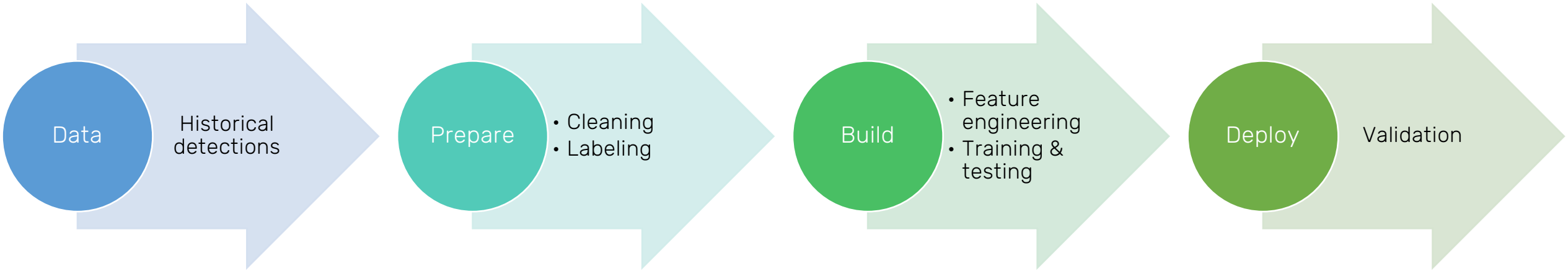
Validation Model



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Thank You!

Bahman Rashidi

Sr. Security Architect
Comcast Cable
Email: bahman_rashidi@comcast.com