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BEYOND CODE: A DEVELOPER'S GUIDE TO AWS COST AWARENESS & SMART CLOUD DECISIONS

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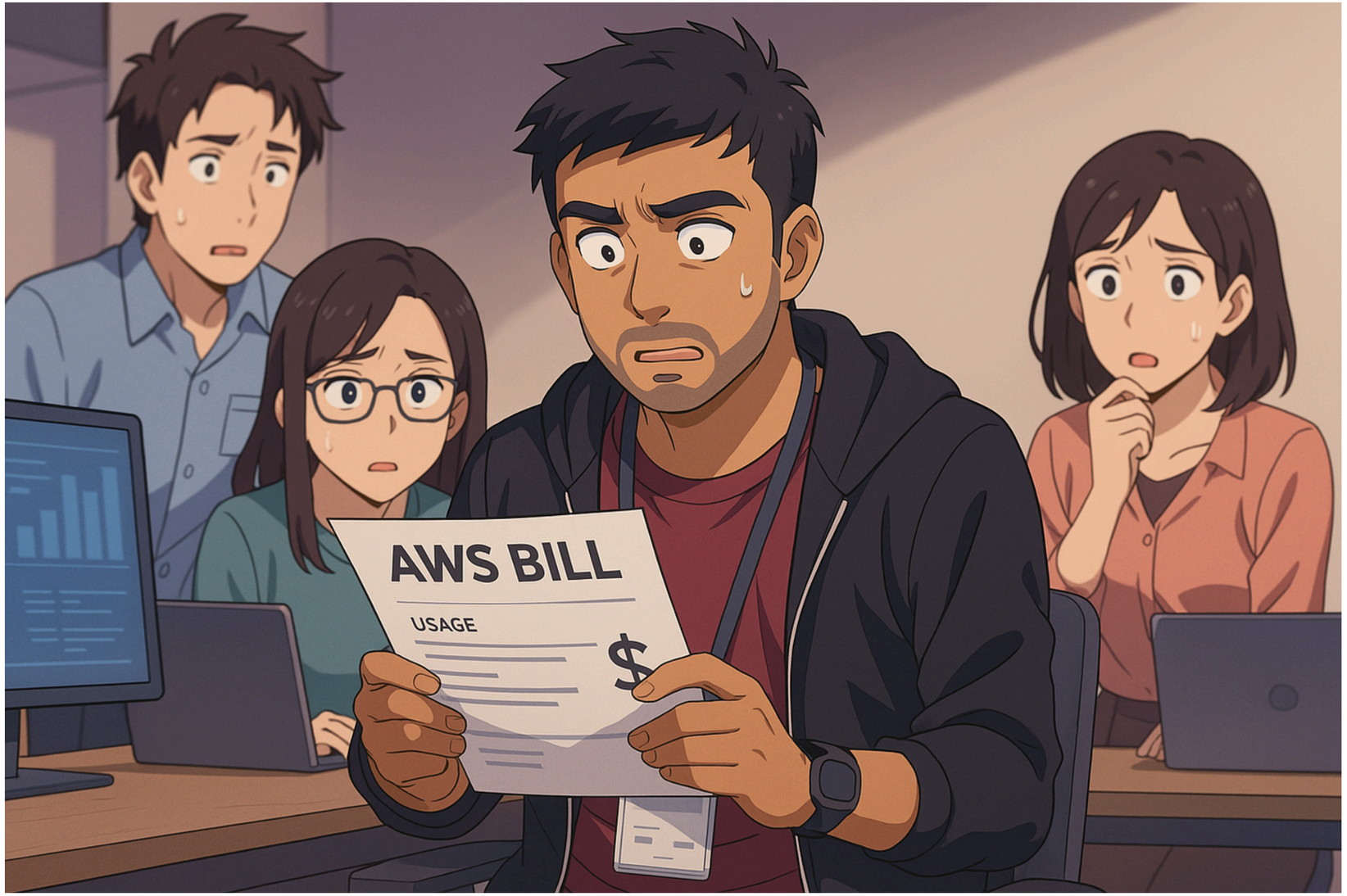

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The Unexpected AWS Bill

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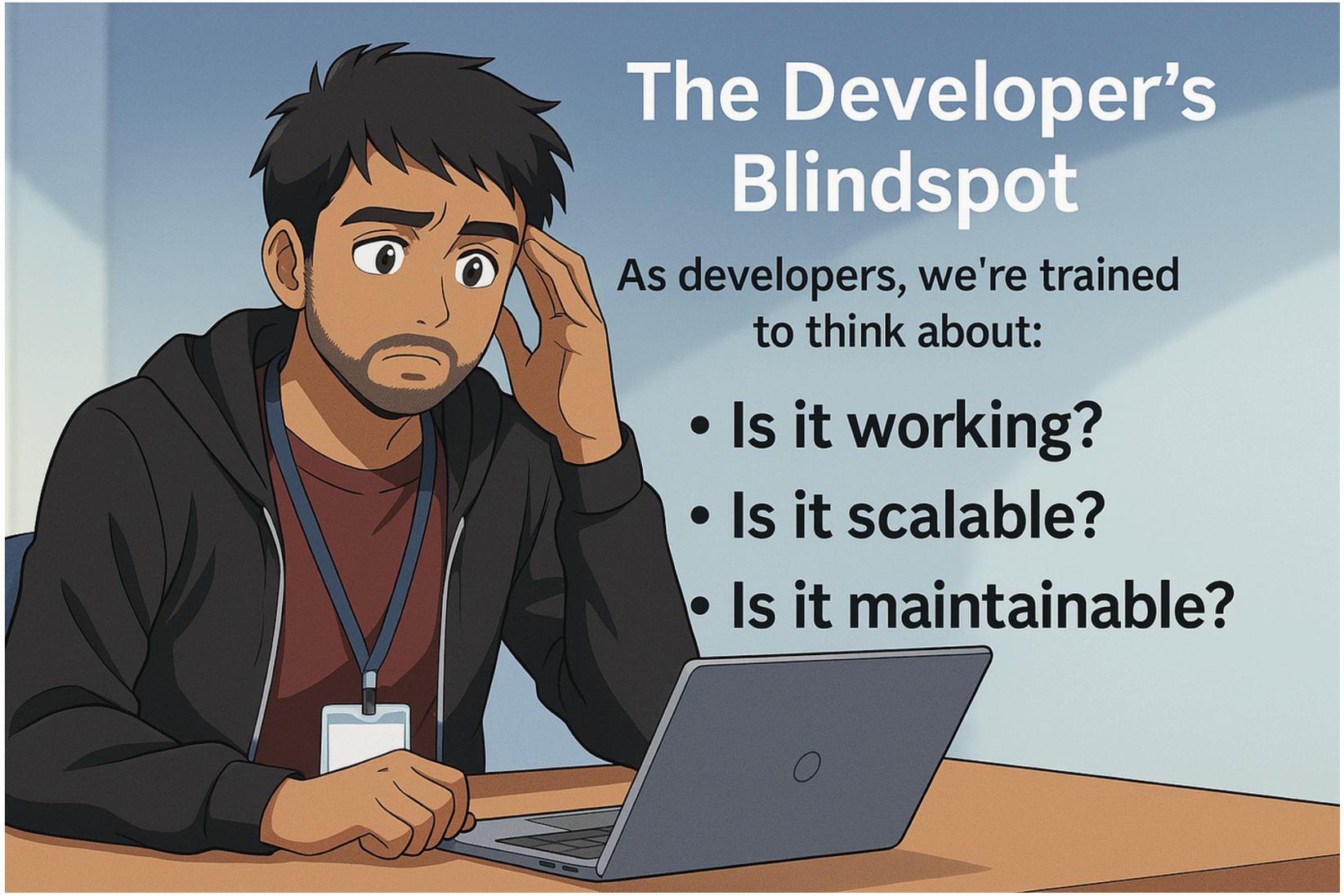

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From Problem to Solution

- Problem: Continuous running of dev/staging environments
- Old Cost: $256-$260 monthly for 3 EC2 instances but actually running 6 instances (which has no used) and some are stopped with EP attached

Analyse

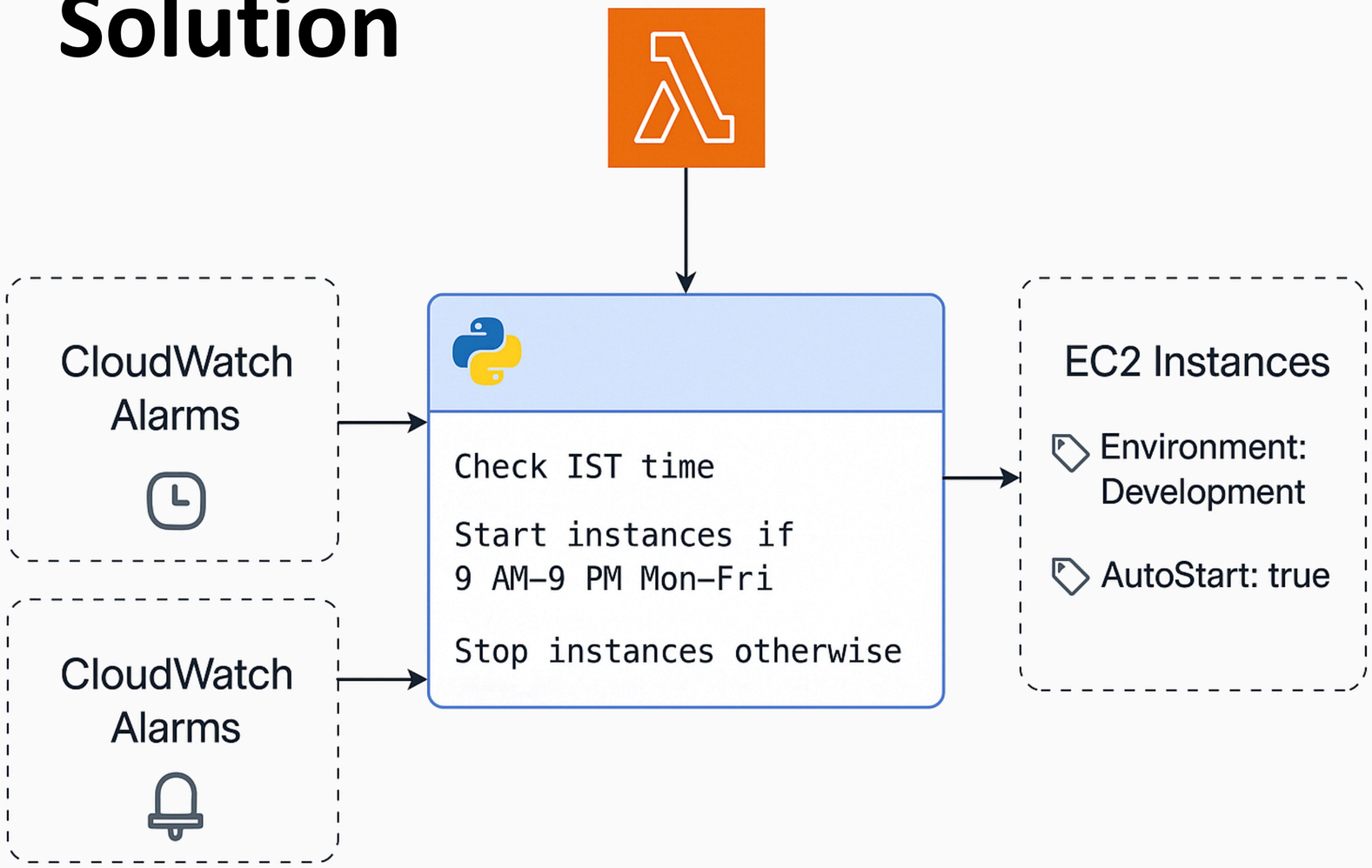
- How many instances running ?
- How many are actually using ?
- How many are stopped didn’t complete cleanup
- How many hours instance requirement is ?
- is any instances are well optimised ?
- Many more....

Solution

Lambda + CloudWatch Event Rules

- Automatically stop environments after work hours
- Restart during work hours
- Completely offline during weekends

Solution



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Scan for code samples

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Result

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Immediate 50% cost reduction

- Dropped monthly bill to $150
- Minimal development effort
- Maximum financial impact

The Elastic IP Trap

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AWS Update (Feb 2024): Elastic IPs No Longer Free

Discovery: Unexpected charges for unused IPs

- Action Taken:Comprehensive IP address audit
- Released IPs for stopped instances
- Kept only essential static IPs

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One Forgotten IP Can Cost More Than Your Morning Coffee

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Cost Optimization Toolkit

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3 Essential Developer Strategies

AWS Cost Explorer

- Identify unexpected cost increases
- Filter and analyze by service/tag

AWS Budgets

- Set alerts at 50%, 75%, 90% of target
- Catch spending spikes early

Smart Tagging

- Track resources by project
- Set expiration dates
- Identify ownership

Service Cost Comparison

Choosing the Right Service

Cheapest ≠ Most Cost-Effective

Service	Monthly Cost	Best For
Lambda	$750	Small, sporadic tasks
Fargate	$320	Consistent workloads
EC2	$180	Complex, long-running tasks

Service Selection Playbook

Know your DNA

- Task duration (seconds vs. hours)
- Traffic patterns (spiky vs. consistent)
- Scaling requirements (instant vs. gradual)
- Complexity (simple function vs. entire system)

Service Selection Playbook

True Cost

- Direct service costs + operational overhead
- Development time + maintenance burden
- Scaling costs + risk of over-provisioning

Service Selection Playbook

Hybrid Approaches

- Use Lambda for APIs, EC2 for background jobs
- Mix Reserved Instances for base load, Spot for variable
- Shift static content to S3, dynamic to compute services

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Re-evaluate your choices quarterly as workloads evolve!

Developer's Checklist

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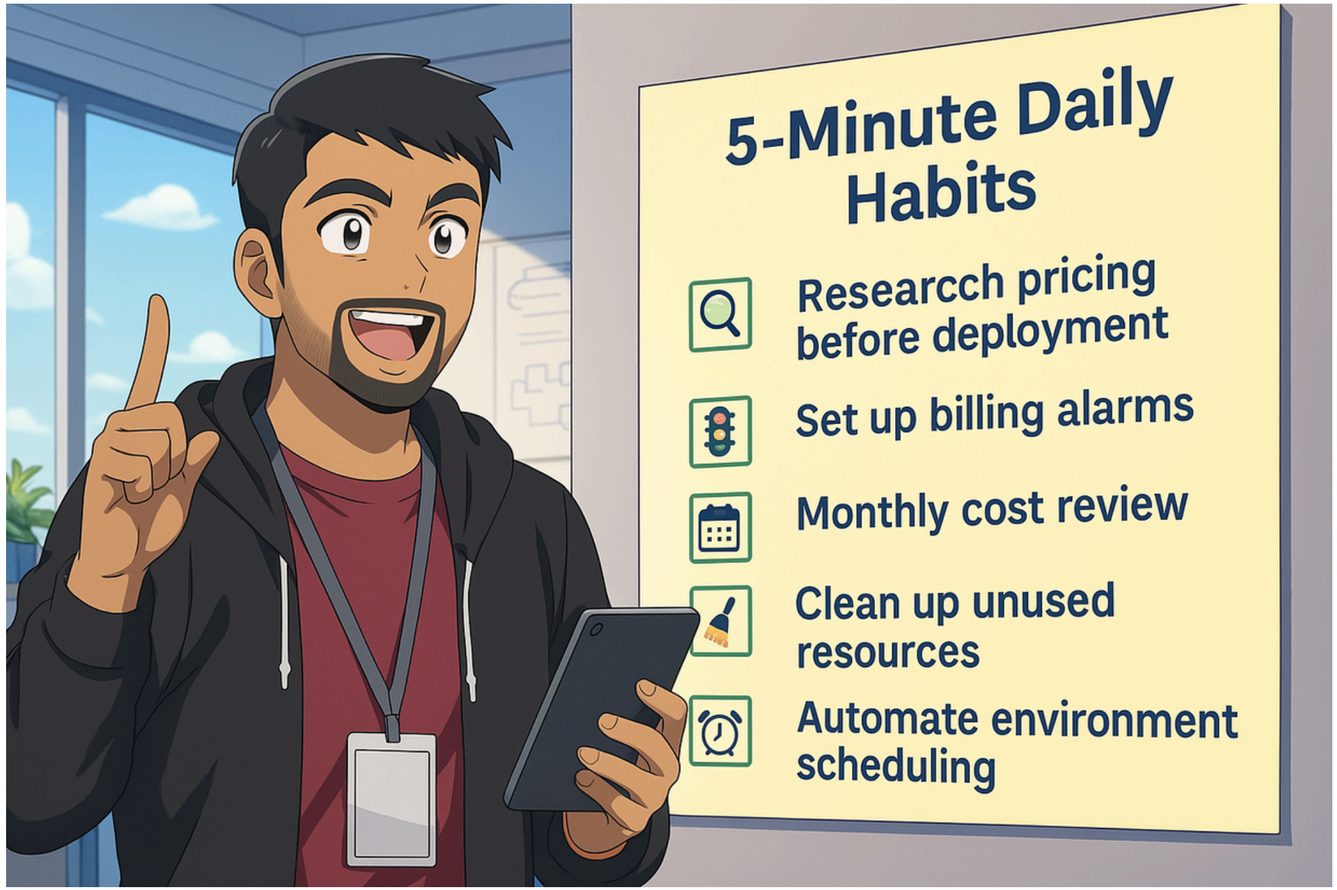

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Cost optimisation is a developer skill

Final Takeaways

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