

# Cory Coward

Software Engineer

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## Professional Summary

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Accomplished electrical engineering graduate with over 13 years of experience in software design and development, actively pursuing opportunities in the software engineering field. Recognized for exceptional multitasking abilities and executing complex tasks with precision and efficiency. Offers a distinctive blend of technical expertise and effective communication skills with diverse audiences, having worked on cross-functional teams of up to 20 members. Aiming to contribute as a strategic asset to enhance team capabilities and drive projects towards success.

## Core Competencies

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- Proficient in Python, C#, C, C++, TypeScript, and SQL, with a proven track record of delivering impactful software solutions.
- Strong foundation in analytical problem solving and advanced mathematics, enhancing software engineering capabilities with insights from circuit design and physics principles.
- Rapid learner and analytical thinker committed to continuous professional and personal growth.
- Strong interpersonal and communication skills, fostering a collaborative, team-oriented mindset.
- Demonstrated ability to thrive in dynamic environments, bringing innovation and excellence to senior software engineering roles using Agile methodologies.

## Skills

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**Programming Languages:** Python, C#, C, C++, JavaScript/TypeScript, SQL

**Technologies:** .NET Core, Entity Framework, NumPy, Pandas, SciPy, Django, FastAPI, React, RESTful APIs, CMake, Git, GitHub, Docker, Microsoft Azure

**Development Tools:** Visual Studio, VS Code, JetBrains IDEs

## Education

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**Mississippi State University**

*Starkville, MS*

Bachelor of Science (B.S) in Electrical Engineering, Minor in Mathematics

## Work Experience

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**Geico**

*Remote (Southborough, MA)*

Senior Engineer

*July 2024 - Present*

Implementing a scalable solution to streamline frequent updates to customer interaction flows.

- Developed and implemented key features of a low-code tool enabling sales and product teams to modify complex customer interaction flows without developer intervention, reducing engineering bottlenecks and improving operational agility
- Transitioned to supporting the live production system, resolving backlog issues, refactoring legacy code to modern software patterns, and enhancing security by addressing vulnerabilities and enforcing best practices
- Worked on a large-scale insurance platform serving 16 - 18 million users per month, ensuring high availability, performance, and security within a distributed cloud environment
- Skills utilized: C#/.NET Core, TypeScript, Git, Microsoft Azure, CosmosDB

## **Dangeun Pay Inc. (KarrotPay)**

Founding Member & Site Reliability Engineer & Infrastructure Team Lead

Seoul, S.Korea

Mar. 2021 - Jun. 2023

- Everything that matters.
- Designed and provisioned the entire infrastructure on the AWS cloud to meet security compliance and acquire a business license for financial services in Korea.
- Continuously improved the infrastructure architecture since launching the service. (currently 3.6 million users)
- Established a standardized base for declarative management of infrastructures and service deployments, enabling operational efficiency and consistency. Over 90% of AWS resources were all managed through standardized terraform modules. All add-ons and service workloads on the Kubernetes cluster were managed on a GitOps basis with Kustomize and ArgoCD.
- Saved over 30% of the overall AWS costs by establishing a quarterly purchasing strategy for RI (Reserved Instance) and SP (Savings Plan) and by introducing Graviton instances.
- Established a core architecture for regulating of outbound DNS traffic in multi-account and multi-VPC environments utilizing AWS Route53 DNS Firewall and FMS. This significantly increased the level of security confidence in the financial sector's segregated environment.
- Introduced Okta employee identity solution in the company, establishing security policies and configuring SSO integration with over 20 enterprise systems including AWS, GitHub, Slack, Google Workspace. Set up a Hub and Spoke architecture, enabling a collaborative account structure with the parent company, Daangn Market.

## **Dangeun Market Inc.**

Site Reliability Engineer

Seoul, S.Korea

Feb. 2021 - Mar. 2021

## **Kasa**

Founding Member & Director of Infrastructure Division

Seoul, S.Korea

Jun. 2018 - Jan. 2021

- Designed on-boarding process to guide new engineers, help them to focus on the right tasks, and set expectations to help them be successful at Infrastructure team.
- Migrated the orchestration system from DC/OS to Kubernetes which is based on AWS EKS. Managed 3 Kubernetes clusters and 300+ pods. Managed all Kubernetes manifests declaratively with Kustomize and ArgoCD.
- Designed and managed complex network configurations on AWS with 4 VPC and 100+ subnets. Separated the development network and operation network according to financial regulations. Established dedicated network connections from AWS VPC to partners' on-premise network based on AWS Direct Connect with secure connection using IPsec VPN. Provisioned OpenVPN servers with LDAP integration.
- Provisioned a observability system with Kafka, Elastic Stack(Filebeat, Heartbeat, APM Server, Logstash, Elasticsearch, Kibana). Collected log, uptime, tracing data from hosts, containers, pods and more. The ES cluster which has 9 nodes processed more than 1 billion documents per month. Wrote Terraform module to easily provision ES cluster on AWS EC2 instances.
- Provisioned a monitoring system with Kafka, Telegraf, InfluxDB, Grafana. Collected metrics from hosts, containers, pods and more. Wrote Terraform module to easily provision InfluxDB with HA on AWS EC2 instances.
- Introduced Kong API Gateway to easily connect all API microservices with a declarative management method based on Terraform and Atlantis to collaborate and audit change history.
- Provisioned the Directory Service for employee identity management based on OpenLDAP which guarantees HA with multi-master replication.
- Implemented Worker microservices consuming Kafka event topics for email, SMS, Kakaotalk and Slack notification. Developed in-house framework to easily build Kafka consumer microservice with common features including retry on failure, DLQ(Dead Letter Queue), event routing and more.
- Introduced Elastic APM to help distributed tracing, trouble-shooting and performance testing in MSA.

## **Omnious. Co., Ltd.**

Software Architect

Seoul, S.Korea

Jun. 2017 - May. 2018

- Provisioned an easily manageable hybrid infrastructure(Amazon AWS + On-premise) utilizing IaC(Infrastructure as Code) tools like Ansible, Packer and Terraform.
- Built fully automated CI/CD pipelines on CircleCI for containerized applications using Docker, AWS ECR and Rancher.
- Designed an overall service architecture and pipelines of the Machine Learning based Fashion Tagging API SaaS product with the micro-services architecture.
- Implemented several API microservices in Node.js Koa and in the serverless AWS Lambda functions.
- Deployed a centralized logging environment(ELK, Filebeat, CloudWatch, S3) which gather log data from docker containers and AWS resources.
- Deployed a centralized monitoring environment(Grafana, InfluxDB, CollectD) which gather system metrics as well as docker run-time metrics.

**PLAT Corp.**[Seoul, S.Korea](#)

Co-founder &amp; Software Engineer

*Jan. 2016 - Jun. 2017*

- Implemented RESTful API server for car rental booking application(CARPLAT in Google Play).
- Built and deployed overall service infrastructure utilizing Docker container, CircleCI, and several AWS stack(Including EC2, ECS, Route 53, S3, CloudFront, RDS, ElastiCache, IAM), focusing on high-availability, fault tolerance, and auto-scaling.
- Developed an easy-to-use Payment module which connects to major PG(Payment Gateway) companies in Korea.

**R.O.K Cyber Command, MND**[Seoul, S.Korea](#)

Software Engineer &amp; Security Researcher (Compulsory Military Service)

*Aug. 2014 - Apr. 2016*

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.

**ShitOne Corp.**[Seoul, S.Korea](#)

Software Engineer

*Dec. 2011 - Feb. 2012*

- Developed a proxy drive smartphone application which connects proxy driver and customer.
- Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.