

ANDREW SEIF



Software Engineer | DevSecOps Engineer | Distributed Systems Engineer | SRE

Email: Andrew.Seif@outlook.com

Cell Number: +(20) 1228474695

SUMMARY

I am a Software Engineer with around 9+ years of diverse experience under my belt that spans all aspects of software development lifecycle, DevOps and deployment, distributed systems design, application modernization, platform engineering and security.

I spent my entire career working for big enterprises and startups, across multiple regions and geographics, both on-site and remotely.

I am a results-oriented individual who has managed multiple multimillion dollar projects and believe there is always a chance to reach that line of win-win situations between business and technology.

I am an "enabler" who enables all parties involved to find and reach their potential. One of the things I love the most is being able to jump into a team and move it forward to make it reach its maximum potential while still making everyone happy and relaxed. It's an equation I enjoy doing continuously and always improve on it!

During my career, I helped multiple businesses to develop, deploy, operate, and upgrade their applications and infrastructure.

Beyond my professional experience, I am a firm believer in the value of knowledge sharing and continuous learning from the experiences of others.

I excel in the following:

- Developing and building highly performant distributed applications.
- Building REST APIs and web services that serve millions.
- Distributed systems design, scaling, and reliability improvement.
- Automating work processes.
- Documentation and knowledge transfer.
- Observability and incident management.
- Spring and Kubernetes!

PROFESSIONAL EXPERIENCE

Jendi AI

Senior Software Engineer - Java

Aug 2024 - Present

Jendi AI is a new startup that aims to use AI to detect, and deal with stress, burnout, among other physiological issues that we face on a daily basis!

Jendi aims to transform wellness, life joy, professional success and life expectancy by deploying real-time actions based on individual behaviours, feelings, biomedical data and more.

In my position as Senior Software Engineer in Jendi, I am responsible for developing the MVP product from the ground up, making critical decisions across both development and DevOps. This includes architecting the overall system design, and selecting the appropriate tech stack.

During my time at Jendi, I:

- Designed and implemented scalable distributed systems handling high throughput and low latency, supporting up to 60k RPS using Virtual Threading in Java 21.
- Developed and maintained microservices-based architectures leveraging Spring Boot, EC2 Graviton, and AWS services for fault-tolerant, distributed deployments, while maintaining low cost.
- Designed distributed caching mechanisms using Amazon ElastiCache to improve performance and reduce database load, while increasing throughput.
- Developed secure APIs with OAuth2, OpenID Connect, and JOSE authn/authz strategies using Spring Security and Spring Auth Server.
- Used Fully Homomorphic Encryption (FHE) through OpenFHE to encrypt the biomedical data before sending it to the backend where the research team will be able to use it without any privacy concern about the user's PII.
- Optimized API response times by implementing lazy loading and efficient data serialization techniques (e.g., Jackson), which improves the performance under high load.
- Developed an extensive test suite covering unit tests, integration tests, and end-to-end scenarios, leveraging Dev Containers to ensure consistent development and testing environments across different systems.
- Developed an extensive upskilling plan for multiple mid and junior level engineers to be able to design, develop and implement highly scalable and performant Java Spring Boot apps in kubernetes, keeping in mind Observability and Testing.

Upwork

Senior Software Engineer - DevSecOps / Python

May 2024 - Oct 2024

Upwork is the world's biggest freelance platform, with billions of dollars worth of transactions happening every month.

Upwork doesn't just provide a platform for developers but many gov and private institutes use it to procure talented individuals, from all disciplines.

In this position as a Senior Software Engineer - DevSecOps, I was responsible for ensuring that all our code (both source code and infrastructure) is secure, and adheres to both NIST and OWASP guidelines.

During my time at Upwork, I:

- Written and updated extensive documentation on multiple processes, including PR checklist, infra upgrading, and source code upgrade guidelines, which reduced the amount of rework and improved work performance.
- Led the work on updating multiple repos to newer versions (Java 11 to 21).
- Improved Infrastructure security by providing Custom fine grained access control after performing extensive analysis using AWS native tools (e.g. access advisor) on the entire org.
- Automated the upgrade of multiple VMs by creating Ansible playbooks, which reduced the number of tickets we receive by 30%.
- Conducted performance profiling and tuning for APIs to achieve sub-100ms response times for critical endpoints.

Kashier

Senior Software Engineer - DevSecOps / NodeJs

Jan 2023 - Jan 2024

Kashier is an E2E payments platform built to empower and simplify your business by taking care of the complex problem of collecting payments and letting you focus on what you do best: running your business and focusing on your customers.

Kashier accepts all popular payment methods and accepts payments via email, SMS, WhatsApp, Facebook, etc.

Kashier is fully PCI DSS compliant as a Level 1 Service Provider. Kashier Handles millions of transactions per month, making it one of the leading payment platforms in Egypt.

At my Position as a Senior Software Engineer - DevSecOps at Kashier, I am responsible for everything DevOps and Infra related!

During my time at Kashier, I:

- Participated in the Migration from AWS to on-premise.
- Led the design and implementation of multiple pipelines in GitLab, which contained linting, building, container scanning, smoke tests, code coverages, cyclomatic complexity, unit tests and deployment. This resulted in faster build times by 40%.
- Implemented GitOps principles by automating the CI to update Argo CD Helm Charts repo, which resulted in automating our deployments from the moment a PR is approved to production (with quality gates in between); instead of doing it manually.
 - It takes 5 minutes for the developer to push to a build branch, until their change is deployed to ArgoCD, enough to grab a cup of coffee!
- Implemented PDB and HPA to deal with high traffic / low traffic scenarios, to have a dynamic environment and reduce cost.
- Designed Preview-Environments which would create an entire environment for the developers, this enabled the developers to rapidly prototype features and fixes when they open merge requests, and then decide to accept/close the merge request when needed, reducing time it takes for Product/QA approvals by almost 80%.
- Instrumented our node microservices to have tracing and log data in ELK which we then used to implement our observability process, as we didnt have any before.
- Automated our MongoDB cluster upgrades by using ansible playbooks to upgrade from 4.2 to latest without any downtime or disruption to our environments; instead of doing it manually.
- Enabled Point-in-Time-Recovery (PITR) for MongoDB, to always keep a snapshot of the latest data changes, to have an acceptable audit/event trail in case of failure.
- Created multiple documentations that plotted our Critical User Journey which was used by developers to get them up to speed on our business.
- Achieved an SLO of 99.5% on production environments and 95% on staging/development environments, and implemented DORA metrics and achieved the following:
 - Deployment Frequency (DF): Multiple times per day.
 - Lead Time for Changes (LT): 1 day.
 - Change Failure Rate (CFR): 3%.
 - Time to Restore (TTR): up to 30 minutes.

GBM

Senior Software Engineer - DevSecOps / Java

Jan 2022 - Dec 2022

GBM is one of IBM's top strategic partners in the Gulf, having partnered with them since their inception as their sole distributor throughout the GCC.

I was responsible for the design, implementation, and upgrade of many of our customers' applications and infrastructure in different industries like Healthcare, Banking / Finance, and Transportation.

During my time at GBM, I:

- Designed and executed robust disaster recovery plans utilizing AWS services, achieving RTO (Recovery Time Objective) and RPO (Recovery Point Objective) targets for critical software components, reducing MTTR by 80%.
- Using Spring Config, I created a centralized repo for config and secrets management, for 60+ microservices, and automated the key rotation between databases and services, which reduced maintenance tickets by 70%.
- Built resilient APIs by implementing circuit breakers, rate limiting, and fallback mechanisms using Resilience 4j and Spring Cloud Gateway.
- Using Spring Bus and actuator, ensured that over 100+ services use hot reload after config changes, without downtime outside k8s.
- Implemented a distributed web stress test (JMeter) with high anonymity (to bypass rate limiting), to ensure that critical infrastructure is not affected by DDoS attacks and/or high traffic.
- Led the work on migrating multiple customers (shift and lift), to the cloud along with Java modernization and containerization.
- Deployed multi cloud OpenShift clusters to ensure maximum resilience in case of regional outages, and in compliance with regulations.
- Designed and implemented a robust cloud-based data pipeline solution, streamlining data ingestion, processing, and distribution to enhance operational efficiency and data accuracy.
- Designed and Implemented a Kafka + Kubernetes interface using KEDA, which allowed HPA and Karpenter Auto scaler to scale based on Kafka number of messages instead of K8s primitives.
- Ensured that our customers maintain PCI DSS compliant.

Infor

Senior Software Engineer - Cloud Consultant / Java

Jan 2020 - Dec 2021

Infor is a multinational company headquartered in New York City that provides industry specific, enterprise software licensed for use on premises or as a service. As of 2016, Infor's software had 58 million users, and 90,000 corporate customers in 200 countries.

I was assigned to work with multiple customers to help them integrate their current infrastructure (cloud and on-premise) with Infor systems while also providing consultation on how to streamline data flow between different system

During my time at Infor, I:

- Established and refined SLOs (Service Level Objectives) and SLIs (Service Level Indicators) for key services, driving reliability and performance improvements for customers I was assigned to.
- Led the design for multiple event-driven ordering systems utilizing Kafka, which improved order response time by 60%, and reduced order misses by 20%.
- Build a unified aggregation API using spring stack and SQS which integrated with 40+ 3PLs, instead of having multiple services to do that work.
- Upgraded multiple JVMs to GraalVM to improve memory used in air gapped-memory intensive applications.
- Using the unified integration API and GPS data from 3PL we enabled real time order tracking feature for customers.
- Led the design for integration between Infor systems and over 300+ POS terminals building new system APIs that were later used by other projects.
- Created and maintained project documentation, technical documents, and designed an on boarding process for new software engineers that were assigned my projects which improved their time to value by 30%.
- Mentored junior engineers by equipping them with necessary documents and offering 1 on 1 sessions, along with pair programming sessions. I delegated key design tasks, enabling them to present their work directly to customers, thereby making them responsible for the deliverables.

Edraky

Senior Software Engineer - Cloud Consultant / Java

Jul 2019 - Dec 2019

Edraky is a Global SAP Partner with more than 25+ years of business experience and is a Leading Systems Integrator in the Middle East & Africa.

I was responsible for integrating SAP solutions with a mix of Azure cloud and on-premises resources. My role involved managing deployments, ensuring data flow between systems, and maintaining security and reliability across platforms.

During my time at Edraky, I:

- Orchestrated and deployed SAP IBP solutions integrating with Azure services such as Azure Data Lake, and Azure SQL, to provide seamless data flow between different systems.
- Assessed current customers' infrastructure and provided a digital transformation roadmap, to migrate their application from legacy systems to cloud.
- Led multiple migrations from on-premise systems to Azure, which also included application containerization and deployment.
- Deployed and maintained multiple AKS production clusters (early adapters).
- Designed and implemented the backup recovery for SAP IBP data, and the frequency of data transfer in and out of SAP IBP.

EOH Group

Senior Software Engineer - Cloud Consultant / Java

Nov 2017 - Jul 2019

EOH is one of Africa and Middle East largest technology services company and has a wide range of solutions in Industry Consulting, IT Services, Software, Industrial Technologies, and Business Process Outsourcing. The Group continues to be an undisputed market leader in its core ICT business.

I was responsible for the design, deployment, and management of multiple systems ranging from SAP integration solutions in a predominantly AWS environment to using AWS in business applications. My primary focus was on maximizing performance, ensuring reliable and highly available systems, while keeping costs to a minimum.

During my time at EOH Group, I:

- Deployed Event Driven SAP architecture utilizing SNS and SQS.
- Participated in the design and implementation and multiple distributed applications that were deployed for Smart Cities.
- Automated routine maintenance tasks and deployments using Ansible and other scripting tools, enhancing efficiency and reducing manual overhead.
- Conducted regular performance analysis, troubleshooting, and optimization of SAP solutions on AWS, ensuring SLAs and performance benchmarks were consistently met.
- Participated in the design, deployment, and maintenance of multiple EKS clusters (early adapters).

BUE

Lab Systems Admin

Sep 2015 - May 2017

The British University in Egypt is a leading International University located in Egypt, which provides student-centered education for students. The BUE offers students education with a global perspective and for active participation in society, in a research- active environment.

I was responsible for the entire Materials Lab. My job was to ensure all resources in the lab are connected and secured, while maintaining redundancy and providing cloud-like on demand compute resources

During my time at BUE, I:

- Managed and maintained 35 hosts across the lab.
- Implemented automated backup solutions that would archive data older than 30 days.
- Designed and implemented scheduling software using Java that integrated with my email and labs calendar, where students would send me an email with specific times, and it would block those times on the lab's calendar.
- Implemented proxmox as a virtualization layer, for quick provisioning of compute resources when needed by grad students to perform complex mathematical computation.

Frank Noe

Systems Admin

Jan 2014 - Aug 2015

Frank Noe is a pharmaceutical plastic manufacturer that provides medical companies with any type of packaging they want.

I was responsible for maintaining the infrastructure and ensuring that all databases are highly available and backed up.

During my time at Frank Noe, I:

- Performed routine system maintenance and updates to ensure optimal server performance across various platforms.
- Participated in the creation of ETL of production data from different sources and aggregating them into the mainstream database (Single source of Truth).
- Achieved a 90% system uptime by deploying Zabbix.
- Implemented an automated daily backup policy and a backup retention policy using cron jobs.
- Improved database recovery times through the implementation of active-standby setup, instead of single instance.
- Automated multiple manual administrative tasks using scripting in Bash.

SKILLS

Programming Languages: Java(SpringBoot), NodeJS, Go, (Scripting)Python, Bash.

Testing: JUnit, Mockito, WireMock.

Authn/Authz: OAuth2, JOSE, JWT, RSA, EC, AES.

K8s Distro: Rancher, K3s, Openshift/OKD, EKS, AKS, Kubeadm, ClusterAPI.

K8s Package Management: Kustomize, Helm Chart.

Service Mesh: Istio, Cilium.

Cloud Providers: AWS, Azure, Linode, Hetzner, GCP.

Databases:

SQL: PostgreSQL, AWS Aurora, MySQL.

NoSQL: MongoDB, Cassandra, DynamoDB, DocumentDB.

In-Memory/Caching: Redis, Val-key.

Object Storage: Minio, S3.

Queues: RabbitMQ, Kafka, SQS.

Virtualization: Proxmox, VMware ESXi.

Data Pipelines: AWS Kinesis, AWS SageMaker, Airflow.

Monitoring & Obsv: ELK-stack, Grafana-stack, Datadog, Zabbix.

CI: GitLab, GitHub Actions.

CD: ArgoCD, FluxCD.

Automation & IaC: Ansible, Terraform, OpenTofu, Pulumi.

Other Tools: Jira, Freshdesk, PagerDuty, Postman, JMeter, Trello.

Spring Stack: Cloud Gateway, Cloud Config Server, Auth Server, Cloud Bus, Spring Batch, Spring Security, Reactive.

API gateways: Kong, NGINX, Apache S1X, Spring Cloud Gateway.

OS: Redhat, Ubuntu, Talos, MacOS.

Source Control: Git, SVN.

CERTIFICATIONS

AWS:

SAA-003: AWS Certified Solutions Architect – Associate, Issued 2023.

Microsoft:

AS-104: Microsoft Certified Azure Administrator Associate, Issued 2023.

SAP:

Certified Associate - Design Thinking, Issued 2018.

Certified Agile Practitioner, Issued 2017.

Design Thinking with a Focus on Business Model, Issued 2017.

EDUCATION

Ball State University

Master of Science in Computer Science, 2025 - (on-going).

Arab Academy for Science, Technology and Maritime

Master of Business Administration (MBA), 2018 – 2020.

British University in Egypt (BUE)

Bachelor, Mechanical (Mechatronics & Software) Engineering, 2009-2014.

LINKS & CONTRIBUTIONS & EXTRACURRICULAR ACTIVITIES

[GitHub](#)

[Some of my articles](#)

LANGUAGES

English :Native or bilingual proficiency

Arabic: Native or bilingual proficiency