

# Ernest Ng

PLATFORM ENGINEER

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## Key Work Experience

### Gotrade Pte Ltd

Singapore

HEAD OF PLATFORM ENGINEERING

May. 2022 - Present

- Optimized infrastructure design, saving over **70% in monthly cost (100K USD)**, enabling scalable growth
- **Accelerated CI/CD by more than 90%** through custom P2P Nix-based runners
- Led successful migration to Kubernetes on EKS, **improving platform agility by 40%** and **reducing operational overhead by 80%**
- Standardized development workflow with Nix-first environments, boosting team productivity and **slashing on-boarding time by 95%**
- **Increased system availability to 99.9%** through implementing comprehensive Observability practices with LGTM Stack and OpenTelemetry
- Architected a high-performance ledger for fast high-volume trade processing using Kafka, **peaking at 5000 TPS**
- Evangelized IaC, containerization, and automated testing through weekly "MasterClasses," fostering a culture of innovation

### ByteDance

Singapore

SITE RELIABILITY ENGINEER

Jan. 2021 - Dec 2021

- Analysed, resolved and regressed alarms for TikTok's Live-Streaming CDN
- Crafted platform to manage multi-region multi-language multi-timezone on-call rostering that **reduced roster configuration time by 50%**
- Developed a distributed and stateless bot framework that **minimized time taken to create a new bot by up to 98.5%**
- Leveraged self-written framework to design platform to automate playbooks, **speeding up alarm resolution by 60%**
- Obtained sales lead **worth USD10,000 annually** for Lark product

### Innosparks, ST Engineering

Singapore

BACKEND ENGINEER

Jul. 2018 - Jul. 2019

- Constructed healthcare platform for post-acute care for Singapore's Ministry of Health, tendering for SGD 5,000,000
- Led team to implement RESTful API server in .NET Core in C#
- Configured centralised monitoring environment (Application Insights) that result in **45% reduction in MTTR**
- Composed CI/CD pipelines on AzureDevops with Azure and Docker that **cut deployment overhead by 80%**
- Devised a computer vision algorithm to extract patient's particulars from the Identity Cards, **lowering patient on-boarding time by 40%**

## Skills

<b>Programming</b>	<b>Proficient</b>   C#, Go, Typescript <b>Fluent</b>   Javascript, Nix <b>Comfortable</b>   C++, Rust, Java, Ruby, PHP
<b>DevOps</b>	Docker, Nix, Terraform, GitLab CI, AzureDevops, Azure, AWS, Digital Ocean, Ansible, Github Actions
<b>Back-end</b>	ASP.NET Core, Express, Nestjs, Gin, Ruby On Rails
<b>Front-end</b>	Svelte, Vue.js v2, Vite, Webpack, Gulp.js
<b>CNCF</b>	Docker, vCluster, K3D, K3S, Kuma.io, Helm, ArgoCD, Ambassador, Kyverno, Traefik, Longhorn, ExternalSecrets
<b>Observability</b>	Prometheus, Grafana, Jaeger, Loki, Thanos, Mimir, Tempo, OpenTelemetry

## Projects

### CyanPrint

Templating Platform

CREATOR

<https://cyanprint.dev>

- A Rust-based CLI that empowers interns to kickstart projects without the complexity of configuration
- Restful API Server to host templates (EKS, vCluster, GitHub Actions, .NET Core)
- Landing Site to sign up for an account and browse for templates (Sveltejs, Cloudflare Pages)
- Fully automated pipelines to publish to System Package Managers (nix flakes, scoop, brew, apt, yum) and publish SDKS to Language Package Managers (pip, nuget, npm, cargo)

### BunnyBooker

Automated Ticketing System

FOUNDER

<https://bunnybooker.com>

- Envisioned, developed, deployed and maintained the platform, with SGD 3000 monthly recurring revenue
- High-performance multi-component scraping engine to watch for ticket refunds (Redis Streams, Golang Channels)
- Restful API to interact with scrapping engine and databases (.NET, GitHub Actions, AirWallex, EKS)
- Landing Site to sign up, purchase, check availability of tickets (Sveltejs, Cloudflare Pages)
- Runs on next-generation modern infrastructure (ArgoCD, EKS, vCluster, KEDA)