

Jeremy Sun

jeremyj.sun@hotmail.com | (416) 854-4803 | jeremysun.me | linkedin.com/in/jeremy-sun | github.com/jeremyj-sun

Technical Skills

- **DevOps:** Jenkins, Argo CD, Terraform, Grafana, Ansible, GitHub Actions, Prometheus, Artifactory, Packer, Slack
- **Infrastructure:** Docker, Kubernetes, Helm, Linux, NGINX, Cloudflare, PostgreSQL, MongoDB, InfluxDB, Redis
- **AWS:** EC2, S3, EKS, Lambda, RDS, ECR, Secrets Manager, IAM, Fargate, EFS, EBS, Route 53, VPC, AMI, Lightsail
- **Azure:** AKS, Key Vault, VMs, Virtual Network, Blob Storage, Load Balancer, Private Link
- **Languages:** Python, JavaScript, TypeScript, Groovy, Bash, C#, C++, Java, PHP, Powershell, SQL, HTML, CSS
- **Frameworks:** Node.js, React, Vue.js, .NET, Spring, jQuery, Express, Playwright, Mocha, Bootstrap, Laravel

Work Experience

DevOps Developer

Mappedin | Waterloo, ON

SEPTEMBER – DECEMBER 2023

- Led the development of a GitOps continuous deployment pipeline for multi-cluster AKS web apps, leveraging Argo CD for declarative configuration, version control and lifecycle management.
- Designed and executed comprehensive stress testing of Azure web services using Grafana k6, achieving a **60% improvement in 90th percentile response time** during peak usage after resolving performance bottlenecks.
- **Reduced code redundancy of Kubernetes manifests by 75%** using Helm library charts and shared registries, enhancing the maintainability and self-serviceability of deployments.
- Introduced continuous integration for Helm chart workflows using GitHub Actions, automating the linting, packaging, tagging, and pushing of YAML manifests upon each merged pull request.
- Integrated Playwright E2E tests into Jenkins continuous delivery pipelines, **reducing test duration by 50%** through parallel execution on GPU-optimized virtual machines.
- Established best-practice secret management infrastructure for AKS clusters by integrating External Secrets Operator with Azure Key Vault.
- Transformed Cloudflare DNS records and firewall rules into scalable Terraform IaC, achieving near-zero manual errors in configuration tasks.

Software Developer – Infrastructure (DevOps)

Sony Interactive Entertainment | Waterloo, ON

MAY – AUGUST 2023

- Developed a robust algorithm to identify and automatically **re-tag over 9000 non-compliant AWS resources** using the TypeScript SDK, **boosting compliance to cloud governance tagging standards by 80%**.
- **Optimized cost-performance of VPC web proxies by 40%** through migration to ARM-based Graviton processors.
- Streamlined network whitelist management by integrating log parsing with traceable security alerts on Slack, automated through AWS Lambda scheduling.
- Identified optimizations to container cost allocation by integrating Cloudability FinOps platform with EKS clusters.
- Developed a proof-of-concept script to provision and mount scalable EFS file storage on serverless Fargate pods.

Software Developer – Build & Tools

Sony Interactive Entertainment | Waterloo, ON

SEPTEMBER – DECEMBER 2022

- Integrated telemetry into Groovy scripts to monitor rate, error and duration metrics for Jenkins CI/CD pipelines.
- Designed an InfluxDB schema for time series that optimizes query performance while minimizing tag cardinality.
- Queried, transformed, and visualized statistical data in Grafana using InfluxQL, **providing an analytics, observability, and alerting platform for 300+ PlayStation continuous integration pipelines**.
- Investigated how package reuse during dependency installations could save **500+ cumulative build hours** per year.
- Implemented a Node.js reporting tool to store weekly telemetry snapshots in Artifactory for long-term retention.

DevOps Software Developer

Imagine Communications | Waterloo, ON

JANUARY – APRIL 2022

- Developed a Jenkins continuous delivery pipeline with Groovy scripts to provision infrastructure, deploy microservices and automate tests, **saving 8+ hours of manual configuration** when validating new builds.
- Automated TLS certificate management for Route 53 DNS, .NET apps and HAProxy using Certbot and LetsEncrypt.
- Led infrastructure team to resolve SSL protocol errors, ensuring on-time delivery of ABC-OTV playout systems.
- Prototyped Packer and Python scripts to migrate on-premises VMware images to compatible AMIs for AWS EC2.
- Standardized Linux virtual machine deployment through Infrastructure as Code, using Terraform and cloud-init.
- Created Ansible scripts to serve network shares across replicated NGINX containers in Docker Swarm clusters.

Software Test Engineer

Homecare Hub | Toronto, ON

MAY – AUGUST 2021

- Initiated, designed and developed an extensible, Node.js web crawler proven to successfully audit web domains, upload generated test reports to an S3 Bucket and catch software defects.
- Identified and eliminated bottlenecks in the application deployment pipeline, **improving build speed by 75%**.
- Configured and deployed a containerized VNC Server on EC2 to enable remote debugging of Selenium scripts.
- Implemented dynamic email templates using Laravel Blade and PHP, **eliminating 6000+ lines of redundant HTML**.
- Developed a tool for patients to request a quote and generate a PDF using a Vue.js, Laravel and MariaDB stack.

Web Application Engineer

Ontario Institute for Cancer Research | Toronto, ON

MAY – AUGUST 2020

- Discovered and resolved security vulnerabilities in the file upload system of PHI sensitive, MERN web apps.
- **Identified 90+ API/UI defects** by analyzing source code, data in MongoDB and server logs in Docker containers.
- Automated regression test suites using Postman API and Bash scripts, **reducing functional test duration by 70%**.

Software Projects

Almposter | CS492 | cs492-project-rosy.vercel.app

MARCH – APRIL 2024

- Designed a gamified quiz where players guess the AI-generated response for a series of prompts.
- Containerized and hosted a Python game server on Amazon Lightsail.
- Implemented response submission logic and analyzed Google Forms data to identify common mistakes.

UWIntraBot

JANUARY 2024

- Led intramural basketball team as captain, organizing team practices, regular season matches, and playoff games.
- Developed a Python Discord bot to scrape online game information and schedule events in the team server.

Story++ | Hack the North 2020++ | devpost.com/software/story-levhaz

JANUARY 2021

- Implemented a dynamic, responsive frontend with React and Material-UI to navigate through interactive stories.
- Tested request endpoints for Express.js API served on Google Cloud App Engine.
- Designed a NoSQL data schema for Firestore database to represent an interactive story as a directed graph.

JavaScript Application Suite | jeremysun.me/projects

JULY – DECEMBER 2020

- Aggregated projects on a **React** web app with a dynamic and intuitive user interface, hosted with Firebase.

Education and Certifications

Bachelor of Computer Science

University of Waterloo | Waterloo, ON

2019 – 2024

Java SE 8 Programmer I Certification

Oracle

JANUARY 2020