Naveen Akkapeddi

PROFESSIONAL EXPERIENCE

Merigo Inc **Remote/WFH, NV**
Lead DevOps Engineer May 2021 - Present

- **Infrastructure Automation**
- *Technologies*: AWS, Ansible, Elixir/Erlang, Docker, Python, Go, AWS Lambda, GitHub Actions, EKS, Self-Managed Kubernetes
    - **Transitioned Development Environments:** Successfully migrated the engineering team's local development environment to Apple Silicon (M1, M2), ensuring seamless integration and performance.
    - **Infrastructure Buildout for Crypto Game:** Strategically planned and executed the deployment and buildout of infrastructure for a newly launched crypto game, ensuring scalability and security.
    - **AWS Lambda Implementation:** Designed and implemented AWS Lambdas to enhance monitoring capabilities, directly supporting the stability of the newly launched game.
    - **Performance Monitoring:** Instrumented performance-related alarms for Erlang's process mailbox system, proactively alerting the team when thresholds were reached. Utilized GenServer and global process registry.
    - **Secure Production Services:** Developed and implemented VPN access and whitelisting protocols for sensitive production services, enhancing security measures.
    - **Enhanced ELK Stack Alerting:** Improved alerting mechanisms within the ELK stack, increasing the responsiveness to potential issues.
    - **CI Pipeline Automation:** Architected a nightly CI build pipeline to automatically provision remote server infrastructure, running end-to-end tests on the latest monolith versions.
    - **Kubernetes Migration:** Migrated infrastructure from EC2 AMIs to k8s as part of proof of concept development. Initially provisioned Kubernetes cluster on Amazon EKS, then switched to self-managed Kubernetes hosted on EC2 instances (with one master node and two worker nodes).
    - **Elixir/Erlang Live Patching:** Live patched development or production environment issues on remote server monolith. After incident resolution, cleaned up patches and submitted PRs for issues/bugs.

- **Production Support**
- *Tools:* PagerDuty, Slack, Alertmanager, Prometheus, OpsGenie
    - **On-Call Rotation Development:** Collaborated with senior engineers and management to design and implement an effective on-call rotation for the newly launched crypto game.
    - **Customer Collaboration:** Coordinated with customer monitoring teams to align on monitoring strategies and report baseline metrics such as MTTR.
    - **Incident Management:** Facilitated root cause analyses (RCAs) for outages, ensuring swift resolution and continuous improvement.
    - **Customer Liaison:** Served as a point of contact for customer inquiries regarding infrastructure and backend systems, providing timely and accurate responses.
    - **Escalation Management:** Managed priority escalations, communicating critical issues directly to the VP of Engineering.

- **Release Management**
- *Tools:* JIRA, Confluence
    - **Release Process Leadership:** Acted as the primary stakeholder for backend infrastructure in the customer's release process, ensuring smooth and successful production software releases.

- **DevOps Team Lead**
    - **Team Leadership:** Conducted weekly DevOps team meetings, fostering a collaborative environment.

- **Work Delegation:** Delegated tasks based on team members' expertise, promoting efficiency and ownership.
- **Empowerment Through Trust:** Emphasized a hands-off approach to management, empowering team members by avoiding micromanagement.

Dun & Bradstreet Inc **Remote/WFH, NV**
Sr. Site Reliability Engineer June 2020 - May 2021

- Infrastructure Automation *AWS, Jenkins, SaltStack, Amazon CDK, CloudFormation, CloudCustodian, Python*
  - Migrated and implemented Troposhere CloudFormation template generation to CDK
  - Created Jenkins job to run linting and tests for CDK repo
  - Developed and automated deploy of PoC microservice to ECS / Fargate using CDK
  - Developed and implemented security autoremediation policy for all EC2 instances in business unit using CloudCustodian deployed to AWS Lambda in all AWS accounts
  - Automated removal of unused EBS volumes in AWS account, leading to cost savings when removed.
  - Enabled distributed tracing on web applications, to further enhance logging capability for web applications and improved traceability of web requests.

- Production Support *PagerDuty, xMatters, Monit, Papertrail,*
  - Participated in on-call rotation for one week every month to do production support
  - Escalated issues with considerable risk to development tech lead and engineering manager
  - Performed RCA on failing production and QA services, minimizing outages and conforming to organization level SLOs and SLAs

- Release Management *JIRA, Confluence*
  - Supported team's release process by performing release manager weekly rotation
  - Summarized business need and risk for tickets SRE team worked on during weekly sprint cycle

Apex.AI, Inc **Palo Alto, CA**
Sr. DevOps Engineer (Platform) May 2019 - Nov 2019

- ApexOS ECU Buildfarm *Docker, Python, C++, C, Amazon Web Services, GitLab*
  - Designed and implemented embedded build and test automation farm
  - Automated running nightly performance tests on the embedded buildfarm. Hardware includes embedded platforms our customers target for their autonomous driving software, such as the Renesas RCAR-H3
  - Created custom GitLab CI Runner to facilitate running generic tests on embedded platforms running our dockerized build environment for ARM64 and x86_64, which communicates over serial port and SSH for end-to-end automation including flashing embedded hardware
  - Implemented utility to set unique hostnames on embedded platforms, aiding the platform team in diagnosing and validating faulty hardware
  - Presented work on embedded build and test automation farm to partners and customers, gathering feedback and driving future improvements/requirements.

- Infrastructure Automation *Ansible, Terraform*
  - Created centralized monorepo for Ansible playbooks and infrastructure automation
  - Implemented Ansible playbooks for provisioning every embedded platform we support for our customers
  - Implemented Terraform layout of our existing AWS infrastructure that was manually spun up

Anki Inc **San Francisco, CA**
Software Engineer (Build) June 2018 - May 2019

- Vector/Elemental Platform *Go, Docker, Python, C++, Java, Groovy, Ansible, Amazon Web Services*

- Designed and built CI/CD pipelines for different build configurations for Vector robotics platform
- Dockerized build environment to guarantee and verify 100% reproducible builds
- Utilized Ansible to orchestrate spinning up microservices and Jenkins CI/CD server
- Programatically set up Okta integration and Jenkins CI/CD user groups
- Designed and implemented microservice to schedule pull request builds based on Github events using AWS Lambda, SQS, and AWS API Gateway
- Piped GitHub Pull Request events to Slack
- Designed and implemented microservice to provision minimum amount of vSphere VM resources to run CI/CD pipelines, saving the company VMWare licensing fees

▪ R&D Project *Python*
- Created proof of concept for facial emotion detection/empathy on Vector robotics platform. The robot would recognize your facial emotional state using machine learning for face detection/analysis. The robot would play a specific animation, reacting to your facial expression.

Work Exchange Inc **Sunset Beach, CA**
Co-Founder/CTO 2017 - June 2018

▪ Woxio (Backend) *Go, Docker, PostgreSQL, MongoDB, Redis, Amazon Web Services*
- Designed and implemented scalable REST API for Woxio.
- Designed and implemented scalable chat server utilizing WebSockets.
- Implemented microservice architecture with Redis PubSub (microservices communicate with each other via JSON messages)
- Designed and implemented document conversion microservice that ingests Office formats and returns PDF for front-end document preview feature.

▪ Woxio Teams (Frontend) *HTML5, CSS3, WebRTC, JavaScript, Polymer*
- Designed and implemented HTML5 video conferencing with WebRTC for Woxio Teams.

Apple Inc **Cupertino, CA**
iOS Location Engineer, Wireless Technologies 2014 - 2017

▪ CoreLocation *Python, Bash*
- Automated QA testing of new location services (GPS) features for iOS and watchOS.
- Parallelized iOS device log processing pipeline to utilize Hadoop Cluster, instead of sequentially processing very large numbers of small files.

▪ CoreLocation Frameworks *Python*
- Created automated test suites that are run on-demand with iOS/watchOS device pairs to qualify CoreLocation features using an internally developed framework.
- Automated test suites are used in daily Continuous Integration system for CoreLocation.
- In one automated test case, utilized tesseract to OCR watchOS homescreen screenshots to validate an internal CoreLocation feature that drives local sunrise/sunset time.

▪ Misc (20% Project) *Objective-C*
- Mail client that allows users to create tags to categorize their emails using supervised machine learning.

J.P. Morgan Chase & Co **Jersey City, NJ**
Technology Analyst, Central Technology 2012 - 2014

▪ Developed business requirements as per clients' specifications. Automated manual daily tasks using scripting languages. Worked primarily for compliance/risk management group.
- Created, modified, and debugged Python scripts that involved ETL of binary files into JSON.
- Unit tested code to full coverage. Used pylint to point out problematic areas in existing code.
- Did manual QA testing of a real time web dashboard.

▪ Proprietary Project
- Mortgage Banking: Advised Mortgage Banking client on the best way to integrate Google Search API with Company Home Intranet Search. Parsed XML feed from software and provided it to Intranet Services Group for search engine indexing.

EDUCATION

Drew University **Madison, NJ**
Bachelor of Arts, magna cum laude (GPA 3.8) Fall 2009 – Spring 2012
Majoring in Economics

Relevant Coursework: Econometrics, Artificial Intelligence, Statistics, Symbolic Logic, Data Structures.
Research Assistantship: Assisted Dept. Chair in econometric analysis of the effect sanctions had on entrepreneurship in Iran.
Final Project: Attempted to predict the stock price of a particular stock (GOOG) using neural networks.

ACTIVITIES & RECOGNITIONS

Drew University:

- **Dean's List** – Fall 2009 - Spring 2012
- **Omicron Delta Epsilon –** International Economics Honor Society
- **Summer Wall Street Program**
- **Donald J. Fariello Memorial Prize**
- **Economic History Award**