KANDARP PATEL

Software Engineer & DevOps Engineer with 3+ years of experience building scalable microservices, cloud-native applications, and ML pipelines

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TECHNICAL SKILLS

Programming Languages: C#, Python, JavaScript, TypeScript, SQL, YAML, Groovy
Machine Learning & Data Science: PyTorch, TensorFlow, scikit-learn, OpenCV, NumPy, Pandas, Matplotlib, YOLO, Transformers, Autoencoders, SageMaker, AWS Rekognition, Data Preprocessing, Feature Engineering, Model Optimisation
Backend Development: .NET Core, Node.js, Express.js, Django
Frontend Development: React, Next.js, React Native, Redux, HTML5, CSS3, Bootstrap, jQuery
Cloud & Infrastructure: Amazon Web Services (AWS), Azure, Docker, Kubernetes, Terraform, Serverless Architecture, Infrastructure as Code (IaC)
DevOps & CI/CD: Jenkins, Argo CD, GitHub Actions, Helm, GitOps, Continuous Integration & Delivery
Security & Compliance: DevSecOps Practices, Vulnerability Scanning (SonarQube, Trivy), Secrets Management, Security Policy Automation
Databases: PostgreSQL, MySQL, SQL Server, MongoDB, Redis, Elasticsearch, Snowflake
Messaging & APIs: Apache Kafka, RabbitMQ, RESTful APIs, SOAP, OData, Webhooks
Testing & Quality Assurance: NUnit, Moq, Selenium, Test-Driven Development (TDD)
Tools & Collaboration: Git, GitHub, Jira, Confluence, Postman, Lucidchart, SSMS
Software Architecture: Microservices, Event-Driven Architecture, Serverless Design, SOLID Principles, OOP, Data Structures & Algorithms, Cloud Computing

WORK EXPERIENCE

Machine Learning Engineer

DeepSense, Halifax, Nova Scotia, Canada | **September 2025 – Present**

- Trained **Masked Autoencoders (MAE)** to reconstruct and learn representations of underwater acoustic environments, enabling self-supervised understanding.
- Built a **ResNet-based multiclass classifier** on top of MAE embeddings to distinguish vessel-specific acoustic signatures from multi-channel hydrophone spectrograms.
- Explored and implemented advanced acoustic feature extraction techniques, including beamforming, Mel-spectrograms, log-Mel features, and spectral contrast, to enhance robustness across noise conditions.
- Developed a **U-Net denoising pipeline** to suppress environmental and sensor noise, **improving downstream classification accuracy** and clarity of reconstructed spectrograms.
- Implemented an **AIS-driven acoustic data filtering pipeline** to synchronise vessel activity with hydrophone detections for supervised training.
- **Engineered scalable spectrogram generation and preprocessing pipelines** for high-throughput, multi-channel underwater acoustic data.
- Built a **Streamlit application for real-time inference** and visualisation, enabling interactive inspection of reconstructed and classified acoustic spectrograms.

Software Engineer

Maruti Techlabs, Ahmedabad, Gujarat, India | **June 2023 – July 2024**

- Re-engineered legacy **C# / NET-based monolithic systems** into modular **.NET Core microservices**, containerising them with **Docker** and deploying on **Kubernetes**, enabling smoother **CI/CD** integration. This transition helped cut down security issues by 60% and led to a 25% improvement in API response times.
- Built and maintained CI/CD pipelines using **Jenkins** and **Argo CD,** integrating **DevSecOps** scans and configuration management practices to ensure consistent, versioned, and defect-free deployments to **AWS EKS.**
- Created and maintained **Helm charts** to standardise **Kubernetes deployments**, enabling consistent, repeatable releases across multiple environments and easy rollouts.
- Configured **New Relic APM** for application performance monitoring and logging, integrating with **AWS Monitor** and **OpsGenie** for intelligent incident management and automated alerting across AWS Cloud Infrastructure, reducing mean time to resolution (MTTR) by 50%.
- **Collaborated with QA and developers** to streamline the deployment process and document workflows using Lucidchart, leading to faster and more reliable releases.
- **Mentored 3 junior developers** through internal grooming sessions, established KPIs for code quality and delivery timelines, and improved team productivity by 30%.
- **Led monthly sync meetings with stakeholders** and QA teams to align project goals, share progress updates, and gather feedback to guide delivery priorities.
- Participated in 10+ Agile sprints with QA collaboration, focusing on peer code reviews, helping reduce production bugs by 35% through **SOLID principles** and **TDD practices**.

Associate Software Engineer

Maruti Techlabs, Ahmedabad, Gujarat, India | **June 2022 – May 2023**

- Diagnosed and fixed high memory usage in a **C#/.NET Core microservice** through systematic debugging and log analysis, resulting in a 45% reduction in memory consumption.
- Improved performance of **REST APIs** by 40% through **Entity Framework Core** optimisations, Redis caching, and asynchronous request handling.
- Developed event-driven synchronisation to push campaign and ad group data from internal microservices to the Google Ads platform using **RabbitMQ messaging** and **Google Ads API,** automating campaign deployment and enhancing **SEO performance tracking**, while reducing manual setup time by 60% and improving ad delivery optimisation.
- Automated mission-critical workflows with **Apache Airflow** that monitor **RabbitMQ**, triggering Slack and email alerts for queue thresholds to ensure system reliability.
- Implemented **Redis distributed locking** to handle concurrent access, reducing race conditions and **improving data consistency**.
- Developed comprehensive unit test suites using **NUnit and Moq**, achieving 85% code coverage and implementing TDD practices for robust application delivery.

Software Engineer Intern

Maruti Techlabs, Ahmedabad, Gujarat, India | **December 2021 – May 2022**

- Actively participated in daily stand-ups and retrospectives as part of Agile teams, collaborating with QA engineers and demonstrating strong communication skills.
- Developed responsive web applications using the **React framework** with **TypeScript**, implementing component-based architecture for **scalable front-end development**.
- Integrated **RESTful APIs** using **React hooks** and custom data fetching, **optimising data flow and improving application performance** by 25%.
- Built dynamic user interfaces with React component libraries and controlled forms, enhancing user experience and ensuring data integrity across web applications.

PROJECTS

CommuneDrop – Microservice Cloud-Native Delivery Tracking Platform

Java, Spring Boot, React, Node.js, MongoDB, Redis, AWS, Kubernetes, Terraform, Jenkins, Kafka

- Architected a cloud-native microservices platform on **AWS EKS** using **Terraform IaC** and **Kubernetes** orchestration, supporting 10+ concurrent users.
- Developed 6 **.NET Core microservices** implementing Apache Kafka event-driven architecture for resilient inter-service communication.
- Reduced driver tracking latency by 40% through **AWS Location Services** integration, **Redis caching layer**, and **Socket.IO real-time updates**.
- Implemented **DevSecOps practices with Jenkins CI/CD pipelines**, embedding security scans and **Terraform** encryption policies to reduce vulnerabilities by 25%.
- Built a centralised identity server implementing **OAuth 2.0 for secure authentication** and authorisation across all microservices.

TravelStories – MERN Stack Travel Blog Platform

TypeScript, React, AWS EKS, Jenkins, Argo CD, Docker, SonarQube, Trivy

- Deployed a three-tier **MERN stack application** on **AWS EKS with Jenkins CI pipelines** and **ArgoCD GitOps** for automated deployment workflows.
- Integrated comprehensive **DevSecOps** security scanning using **SonarQube** code analysis and **Trivy** vulnerability detection in the CI/CD pipeline.
- Managed scalable Kubernetes infrastructure with Helm charts and EKSCTL multi-node clusters for efficient container orchestration and auto-scaling.
- Enhanced performance with Redis caching, **Prometheus/Grafana monitoring stack**, and real-time deployment notifications for 99% system reliability.

EDUCATION

Dalhousie University, Halifax, Nova Scotia, Canada

Master of Applied Computer Science (4.00 GPA)