ARUN NASARAIN

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EDUCATION

University of Illinois, Springfield, Illinois   **Aug 2022 - Dec 2023**
Master of Science in Computer Science

Anna University, Chennai, India   **May 2016 - Nov 2020**
Bachelor of Engineering in Computer Science and Technology

SKILLS

Tech Stack: Unix/Linux, Shell Scripting, Redis, Kafka, Git, AWS, CI/CD, Jenkins, Docker, Argo CD, Kubernetes, Elasticsearch, Grafana.
Functional Skills: Agile, Test-Driven Development, SCRUM, JIRA, Confluence.
Programming Languages: Golang, Python, JavaScript, Java, C#, C, C++.
SQL/NoSQL Databases: MySQL, PostgreSQL, DynamoDB, MongoDB.

PROFESSIONAL EXPERIENCE

More than Playgrounds | **Software Engineer** | Chicago, IL   **Feb 2024 – Present**
- Revamped data import process, reducing import time by 40% and increasing efficiency by eliminating manual input errors.
- Optimized the distance function algorithm to improve accuracy in calculating driving distance, resulting in a reduction of Google API calls by 95%.
- Configured **AWS ECS** to deploy a dockerized **Django** application, optimizing performance and decreasing deployment time by 40%. Implemented **AWS Amplify** to host the **Nest.js** frontend, resulting in a 30% increase in website speed and a 20% decrease in server costs.

Sprowt | **Software Engineer Intern**| New York City, NY   **May 2023 – July 2023**
- Developed and executed a comprehensive plan to integrate in-house video conferencing with whiteboard functionality, resulting in a 20% increase in team collaboration and productivity.
- Engineered a scalable backend infrastructure using **AWS EC2**, DNS in **Cloudflare** and private subnet using **AWS VPC** for database instances to support high traffic volumes, resulting in a 40% increase in system reliability.
- Developed and implemented APIs in **Django** framework to improve system efficiency, resulting in a 40% reduction in response times for client requests.

Exotel Techcom | **Software Engineer, Backend** | Bangalore, India   **Jul 2020 - Aug 2022**
- Developed the HubSpot-integration application using **Bee GO** for backend and **React.js**, HTML, and CSS for the frontend, resulting in onboarding an average of 65 new customers monthly, contributing to company's growth.
- Streamlined deployment processes by implementing CI/CD pipelines for microservices, encompassing **Docker** image creation, **Jenkins** setup, **Ansible** scripts, EC2 configuration, Route53 rules, **Kubernetes** pods, Argo CD, ensuring scalability.
- Enhanced the Freshdesk middleware service by migrating from webhooks to web sockets using **Socket.IO** in **Node.js**, resulting in a 47% improvement in response time compared to the previous version.
- Collaborated with the product team to introduce key functionalities, improving the customer-facing product experience and achieving a 32% increase in usage through A/B testing.
- Developed a **gRPC** module using **Go** for a middleware microservice, delivering improved latency and performance, accelerating data transfer speeds fivefold compared to traditional REST protocols.
- Demonstrated problem-solving skills by resolving production issues for services owned by different teams during on-call weeks, maintaining a mean time to resolve of less than 20 minutes to ensure application reliability and minimize downtime.
- Implemented a **CRON** job to archive MySQL data and configured **Logstash** to archive logs, preventing machine space issues and achieving zero downtime.

PROJECTS

Face Recognition Attendance System: GitHub   **Jan 2024 - Mar 2024**
- Developed a webpage using HTML and **JavaScript** to access the webcam, capture employee images, and transmit them to the server, utilizing Python's face-recognition package to compare with registered employee details in PostgreSQL.
- Established a dashboard for administrators to monitor daily attendance, authorize leave requests, and enroll new employees with their images using **Django** wherein images are stored for facial recognition purposes.
- Constructed an employee dashboard for checking attendance and leave reports, integrating a leave request section within the application for streamlined processing.

Video Calling and Screen Sharing Application: GitHub   **Nov 2023 - Jan 2024**
- Implemented a resilient server-side architecture and established socket connections with **Node.js** and **SocketIO** for real-time client communication, notifying all users within a room when a new user joins.
- Deployed a local **PeerJS** server to enable peer-to-peer **WebRTC** connections among users, facilitating video calls within the room and screen streaming, with added functionality for toggling audio and video.
- Developed a chat feature allowing users to send messages to others, including the sender's name, with automated notifications for user join and leave events within the room.