
Michael Knowles

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SUMMARY

Highly dedicated and analytical staff software engineer with over 8 years of experience in software development and data analysis. Proficient in architecting and implementing solutions to complex problems, with a focus on quality and maintainability. Adept at working cross functionally and mentoring junior team members to bring about the best product possible.

SKILLS

Go, Javascript, Typescript, Java, Docker, SQL, NoSQL, React, Google Cloud

EXPERIENCE

Alpine IQ - *Staff Software Engineer*

April 2021 - PRESENT

- Promoted from Senior Software Engineer January 2023
- Led a team of engineers developing a SaaS platform in Go, Node, React, and Google Cloud. The platform services over 100 million users, analyzes \$24 trillion in sales, and sends 2 trillion messages annually
- Mentored junior engineers, fostering skill development and knowledge sharing within the team
- Architected a monolith into microservices, improving system uptime from 96% to 99%
 - Established unit/integration tests along with feature flags to ensure behavior parity
- Led the database migration to Google Bigtable to reduce P99 latency from minutes to less than half a second and facilitate scalability
- Reduced average latency for large analytical queries from 10+ minutes to under 5 seconds
 - Developed ETL pipelines utilizing Clickhouse for efficient processing and analytics
- Introduced a CI pipeline to ensure software quality with automated linting, testing, and the usage of non-production environments leading to lower incidence rate and code churn
- Implemented observability to better inform developer decisions and speed up incident/ticket resolution
- Collaborated with cross-functional teams to gather requirements and provide technical guidance, ensuring alignment with business objectives
- Implemented security best practices, conducting regular penetration testing to ensure system integrity and met requirements for SOC 2 and HIPAA compliance
- Cooperated with third party vendors to develop dozens of seamless integrations
- Met directly with clients to gather requirements and feedback for future platform developments

Blue Shield of California - *Application Developer*

January 2019 - April 2021

- Created vendor-facing REST APIs used to query and load data in near real time instead of daily/weekly batches using Java Spring and Oracle SQL

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- Re-architected Java and Informatica applications improving performance by up to 50%
 - Created tooling for unit test case creation and logging using React, Node.js, and OracleDB
 - Developed a program to validate production deployments and sync environments using Python. Reduced manual work and improved accuracy saving over 30 hours per release
 - Formed a collaborative team knowledge base for onboarding and team documentation using Confluence
 - Piloted the transition of the business to Agile from Waterfall

Nidec Corporation - *Network Engineer*

September 2018 - December 2018

- Created baseline Windows images utilizing MDT/WDS to optimize the provisioning process
- Virtualized physical servers running Windows or OpenSuse Linux onto HyperV
- Worked on Cisco networks and the SAP ERP system

SAI - *Systems Analyst*

June 2016 - September 2018

- Analyzed millions of call detail records (CDR) using BASH/Python scripts and Tableau to help clients gain valuable insight into their data and pinpoint issues
- Developed new features and debugged software written in C++, C#, and Javascript
- Supported client IT teams to install, configure, and maintain on-site devices

DSD Solutions - *Developer and System Administrator*

January 2013 - September 2016

- Managed the system and network infrastructure that ran client applications, websites, and email
- Worked directly with clients to design websites according to their specification
- Developed websites using a variety of technologies based on the client requirements such as Wordpress, CakePHP, Symphony, JQuery, and Javascript