

KEERTHI VIBISAN S

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PROFESSIONAL SUMMARY

Software Engineer specializing in backend engineering, Identity and Access Management (IAM), and secure authentication systems. Experienced in Java, Keycloak, OIDC, and distributed system integrations, with ownership of Keycloak upgrades, custom security extensions, hybrid-cloud data synchronization, and backend architecture. Demonstrated ability to improve delivery efficiency, design extensible backend components, and deliver enterprise identity solutions. Additional experience building React applications and real-time collaborative platforms.

EXPERIENCE

Grootan Technologies | Chennai

Software Engineer

May 2024 – Present

- Owned recurring Keycloak upgrades and extension compatibility, analyzing upstream changes, new features, and deprecations while adapting custom token exchange, partial import, Admin UI themes, and authenticators to maintain compatibility and minimize regression risk across IDP Core releases.
- Designed and implemented real-time MSSQL synchronization between Azure cloud and on-premises environments using SymmetricDS, enabling hybrid-cloud data replication. Configured triggers, conflict handling, and queue-based recovery to support reliable synchronization during server downtime, with zero data loss as the stated design outcome.
- Improved backend extensibility for the Super App by designing low-level architectures for the User Action Processor, XML Parser, and session/state management components, establishing clear component boundaries for future feature development.
- Reduced SparkZen Admin Portal development time from 30 to 20 days by leveraging GPT-assisted development. Delivered analytics dashboards, scheduling, and review workflows, achieving approximately 33% lower development time against the original estimate.
- Evaluated Matrix protocol and Synapse for TI-Messenger, developing proof of concepts for federation, encrypted messaging using Olm/Megolm, and push notification flows to validate technical feasibility and inform implementation decisions.
- Owned sprint execution and coordination, managing ticket planning, prioritization, task assignment, progress tracking, and delivery follow-ups to support timely completion across the team.
- Onboarded and mentored junior engineers on Keycloak development, IAM workflows, debugging, and day-to-day engineering practices, supporting their technical ramp-up and project contributions.

Grootan Technologies | Chennai

Junior Software Engineer – Intern

Jun 2023 – May 2024

- Extended Keycloak brute-force protection to OTP resend workflows, implementing a custom mechanism to strengthen protection against repeated OTP resend attempts and align security behavior across authentication flows.
- Developed IAM and user management capabilities for KOBIL WorkspHERE, implementing OIDC flows, IdP-initiated SSO, and tenant-to-tenant token exchange to support enterprise identity and cross-tenant authentication scenarios.
- Contributed to the Keycloak v19-to-v21 migration, debugging authentication flows, themes, and IAM configurations to address compatibility issues during the upgrade.
- Configured and demonstrated LDAP user federation and synchronization for enterprise IAM clients, validating directory integration and user synchronization workflows.

TECHNICAL SKILLS

- Languages & Frameworks:** Java, JavaScript, Spring Boot, Quarkus, Junit, React
- Backend:** REST APIs, Microservices, JPA, Server-Sent Events, WebSockets, Infinispan
- Identity & Security:** Keycloak, OAuth 2.0, OpenID Connect, SSO, JWT, mTLS, PKI, LDAP
- Data:** MySQL, PostgreSQL, Redis, SymmetricDS
- Tools & Technologies:** RAG, Embeddings, Vector Databases, GPT-based Developer Tools, Git, Docker

PROJECTS

Device Centric Authentication — Passwordless IAM

<https://deviceauth.keertshivibisan.com>

- Designed a passwordless authentication system using trusted devices as the primary identity factor, exploring an alternative to conventional password-based login.
- Implemented a cryptographic challenge–response flow inspired by PKI to mitigate phishing and credential-replay risks.

Docs Online — Real-Time Collaborative Document Editor

<https://docsonline.netlify.app>

- Built a Google Docs-inspired collaborative editor supporting real-time, multi-user document editing.
- Implemented a one-click document-locking feature to provide an explicit mechanism for controlling concurrent document modifications.

Cryptography Chat App — Encrypted Messaging

<https://cryptography.netlify.app>

- Developed a real-time chat application using symmetric encryption to protect message confidentiality.
- Implemented message encryption and decryption workflows to explore cryptographic protection in real-time communication.

ACHIEVEMENTS

GROOT OF THE QUARTER – Q2 2024

Recognized for outstanding performance and technical contribution at Grootan Technologies

EDUCATION

Bannari Amman Institute of Technology

Bachelor of Technology in Computer Technology | CGPA: 9.2

2020-2024

Sathy, India