

Utkarsh Garg

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Experience

Oracle America

Feb 2021 – Present

Senior Member of Technical Staff

Santa Clara, California

- Engineered resilient backend infrastructure for Identity and Access Management (IAM), managing over 10 million daily authentications and ensuring exceptional system availability with 99.999% uptime.
- Led the design and development of critical identity features, including Just-in-Time (JIT) provisioning, MFA support / Passwordless Auth, enhancing user experience while also meeting regulatory requirements (e.g., NSIT, FedRAMP).
- Leveraged distributed caching strategies using Coherence, optimizing session storage, and reducing database load by 50%, resulting in 40% faster authentication response times.
- Designed and implemented asynchronous purge jobs for stale session cleanup, reducing memory footprint by 30% and ensuring compliance with security and data retention policies.
- Enhanced AuthN / AuthZ mechanisms backed by RBAC policies, supporting the secure exchange of access and identity tokens (OAuth) across diverse IAM / Multi-cloud systems.

Sony Interactive Entertainment

May 2020 – Aug 2020

Software Engineering Intern

San Diego, California

- Designed and implemented a vendor-onboarding system, utilizing AWS Suite, to onboard new payment service providers easily, enhancing operational efficiency by 50%.
- Proposed a chargeback orchestration flow, reducing processing errors and enhancing dispute resolution efficiency.

Visa Inc.

July 2015 – July 2019

Associate Systems Analyst → Software Engineer

Bangalore, India

- Streamlined IAM workflows, optimizing usability and performance for a Tier-0 application, serving as a gateway for over 100 services, resulting in 70% manual effort reduction.
- Redesigned user login flows and service entitlement pipelines, enhancing resource creation processes and increasing test coverage to 85%.
- Automated alert-monitoring and health check scripts, implementing IFTTT rules for self-healing actions, reducing operational overhead by 70%.

Education

Stony Brook University

Aug 2019 - Dec 2020

Master of Science in Computer Science (GPA: 3.77 / 4.00)

Stony Brook, New York

- **Coursework:** Data Science, Distributed Systems, Algorithms, Databases, Computer Vision, NLP, Visualization
- **Teaching Assistant:** Data Structures in Java (Spring'20)

SRM University

Aug 2011 - May 2015

Bachelor of Technology in Computer Science (GPA: 9.52 / 10.00)

Chennai, India

- **Coursework:** Data Structures & Algorithms, AI, Data Mining, Image Processing, OS, Network Security

Projects

Recovering Visual Encodings from Chart Images | Python, Flask, AWS Rekognition, OpenCV, D3.js

- Developed an OCR and CNN-based text analysis pipeline to recognize and classify chart elements for visually impaired, utilizing AWS Rekognition and Text-to-speech service, by engineering a model with 92% efficiency.

Passwordless Ultrasonic Auth | Node.js, AudioQR library

- Researched and engineered a novel ultrasonic data transfer method for secure authentication, winning the Best Security Hack at University's Hackathon.

OAuth Playground | Javascript

- Designed web-app for demonstrating OIDC and device auth flows for a streaming application, to facilitate guided learning of token workflows. Winner of OCI's internal Identity Hackathon'24 under 'Best Implementation' category.

Summarization of Scientific Papers using Unified Model | Python, TensorFlow, NLTK

- Developed on existing approaches of extractive/abstractive summarization to implement a unified model using bidirectional LSTM, evaluated on ROUGE scores, achieving 90% accuracy.