Nikhil Komal Kumar Yakkala

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WORK EXPERIENCE

Software Developer | Community Dreams Foundation | USA   **June 2024 – Present**

- Engineered a full-stack volunteer management platform using React 18, TypeScript, Tailwind CSS, and Supabase, managing the complete volunteer lifecycle (registration to offboarding) with role-based access for 4+ user roles.
- Architected and deployed 20+ serverless edge functions for payments, automation, and platform integrations (Slack, PayPal, Taskverse) achieving 99.9% uptime.
- Designed a normalized PostgreSQL schema (15+ tables) with advanced triggers, database functions, and 30+ RLS policies to enforce fine-grained data security.
- Developed 4 admin dashboards and a real-time analytics system with React Query caching, Supabase subscriptions, and priority-based notifications.
- Implemented advanced security controls including JWT verification, RBAC, audit logging for 15+ event types, and CI/CD pipelines via GitHub Actions for daily cron automation.
- Built Python scripts to auto-generate and distribute weekly workforce reports highlighting recent joiners and offboarded users, saving time in manual report generation.
- Delivered measurable impact: reduced manual operations by 40%, improved payment recovery by 25%, and maintained zero downtime during 24/7 deployment cycles.

Associate Professional Software Engineer, Data | DXC Technology | Chennai, India   **August 2021 - June 2022**

- Converted complex business requirements into **cloud-ready ingestion pipelines**, integrating data from databases, flat files.
- Developed Python utilities to auto-generate test data execute unit suites, reducing QA turnaround time and accelerating release cycles.
- Designed and deployed **DataStage parallel and sequence** jobs to cleanse, transform, and load datasets in line with business rules.
- Orchestrated DataStage and DBT workflows via Control-M, ensuring on-time daily refreshes and simplifying operations monitoring.
- Implemented error-handling and logging mechanisms, quickly flagging data-quality issues and accelerating root-cause analysis.
- Captured and tracked unit-test results in Quality Center, ensuring complete traceability from requirements through deployment.
- Delivered end-to-end post-implementation support, resolving critical incidents and tuning pipelines for performance and cost efficiency.

PROJECTS

DePaul University   *Chicago, IL*
Analyzing Gamer Behaviour and Mental Health Patterns Using Machine Learning   **March 2024 - June 2024**

- Classified gamer profiles and analyzed correlations between gaming behaviours and mental health indicators (e.g., anxiety, life satisfaction, and social phobia) using clustering techniques like **KMeans**, achieving a Silhouette Score of 0.72.
- **Identified four distinct gamer clusters** (e.g., High-Engagement Players, Anxious Players) through clustering analysis of a dataset with 13,464 records, providing insights for personalized gaming experiences and mental health interventions.
- **Proposed advancements** such as real-time data integration and advanced clustering methods to improve dynamic user profiling.

Geethanjali College of Engineering and Technology   *Hyderabad, India*
TutorHub Connect   **May 2020 - June 2020**

- **Designed and developed** a scalable web platform using the MEAN stack, connecting 100+ students with local tuition centers and tutors through personalized, location-based search functionality.
- **Implemented JWT and bcrypt authentication**, ensuring data privacy and reducing login issues by **30%**, boosting user trust.
- **Enhanced user experience** by optimizing search and filtering, achieving **20% faster query results**, and increased user engagement.

SKILLS

Programming Languages: Python, SQL, Java, R, C
Data and Cloud: AWS, Snowflake, MySQL, OracleSQL, DBT, Apache Spark, Kafka, DataStage, ETL Pipelines, Relational Schema Design
Automation & DevOps: GitHub Actions (CI/CD), Docker, Control-M, Shell Scripting, Workflow Orchestration, Logging & Monitoring
Web Technologies: React, Node.js, Express.js, Angular, HTML, JavaScript, TypeScript
Analytics & BI: Tableau, Power BI, Data Visualization, Clustering (KMeans), Regression Analysis
Tools & Collaboration: JIRA, Confluence, Quality Center
Core Competencies: Process Automation, Data Quality Assurance, Root Cause Analysis, Performance Tuning, Stakeholder Collaboration

EDUCATION

DePaul University   **Chicago, IL**
Master of Science in Computer Science **GPA: 3.7/4.0**   **September 2022 - June 2024**

Geethanjali College of Engineering and Technology   **Hyderabad, India**
Bachelor of Technology in Computer Science **GPA: 3.2/4.0**   **August 2017 - June 2021**