Alex Joseph

✆ (+91) 9176390201
✉ alexsanjoseph@gmail.com
🖥 blog.alexsanjoseph.com ☑
⊕ alexsanjoseph ☑
in alexsanjoseph ☑

Experience

Apr 2023 –
Oct 2025

CTO and Co-founder, Netrin Sports Technologies ☑

- Scaled platform from **30 to 300 paying customers (10x growth)** reaching **$10,000 MRR** while maintaining same **$700 operational budget**
- Delivered complete infrastructure from scratch to **full-stack MVP in 6 weeks**, production beta in **9 months**
- Executed **zero-downtime legacy migration** of complex research codebase to modern architecture using anti-corruption layers
- **Architected and Implemented full technical stack**: C firmware, Flutter mobile, Kubernetes/Terraform on AWS and FastAPI backend with custom algorithms
- Created **world's first live heart-rate guided training system** with real-time ECG processing at 512Hz.
- Implemented **proprietary algorithms from scratch** for performance metrics, HRV analysis, and recovery tracking with comprehensive testing pipeline.
- Managed **$50,000/month engineering budget (80% of company)** with lean team philosophy delivering high-impact results
- Maintained **20-30% time allocation for debt reduction**, enabling rapid delivery without stability compromise
- Led fully distributed team across cities, implementing comprehensive Agile workflows and quality processes
- Mentored a team where members achieved **300-400% salary increases** upon transitioning to new roles
- **Championed early AI tool adoption** (Cursor, Claude Code, Lovable, Superwhispr) before mainstream, implementing AI-powered customer workflows and coaching automation

Aug 2021 –
Mar 2023

Principal Engineer, Data Architect, HBK India ☑

- Architect of the **Data Platform, bringing disparate data products** in the enterprise under the same roof.
- Led the team in building the Batch Pipeline/Data Discovery modules in the Data Platform.
- Architected the MLOps platform for HBK and implemented PoC showcasing capabilities for a new product.
- Led scaling of Architectural practices within the Data Platform team by implementing processes like Decision Records, Advisory forms and formulating the first version of the Architectural principles for the team

Apr 2020 –
Aug 2021

Principal Engineer, Data Architect and Team Lead, VIMANA ☑

- Scaled data pipeline to **20B records/day (10x increase) in 6 weeks**, enabling enterprise-scale data processing.
- **Led team of 12 engineers** across backend, frontend, and ops (entire team acquired by HBK).
- **Architected cloud-agnostic platform** using Kubernetes for vendor independence, successfully deploying on AWS, GCP, and Azure for enterprise customers.
- **Redesigned Data Science Pipeline** to Modern Data Stack, **reducing cost footprint by 90%** and enabling automatic scaling.

Mar 2017 –
Apr 2020

Principal Engineer, Data Science Team Lead, VIMANA ☑

- Built the **VIMANA Data Science Pipeline** framework enabling analytics via batch processing with R.
- Designed data model for **Enrich** real-time analytics engine processing **billions of data points daily**.
- **Led team of 4 engineers** (recruited entire team) and interviewed 100+ candidates for company-wide hiring.

Apr 2014 –
Mar 2017

Senior Engineer, Data Science Team Lead, VIMANA ☑

- **Integrated Data Science into VIMANA system** with production-quality pipelines for in-product analytics.
- Collaborated with **NIST faculty in Maryland** on Digital Thread tools connecting as-designed, as-built, and as-measured manufacturing stages.
- Developed first R MTConnect adapter on CRAN ☑ for machine tool data parsing and G-Code simulation.

Jun 2011 –
Apr 2014

R & D Engineer, Manufacturing System Insights India

- Contributed to ProPEL flagship product development and showcased at IMTS 2014, Chicago.

Education

2019–2022 **Georgia Institute of Technology, Atlanta**, Online Master of Science, Analytics
GPA – 4.00/4

2007–2011 **Indian Institute of Technology, Madras**, Bachelor of Technology, Mechanical Engineering
GPA – 8.23/10

Personal Projects 🔗

Jan 2022 **Searching for a Riemann Hypothesis Counterexample** 🔗, Golang
- Finding a Riemann Hypothesis counterexample(ironically), by iteratively searching across integers.
- This application follows the footsteps of a master programmer 🔗 who did the same using Python.

Oct 2020 **AWS Instance Recommender** 🔗, Python
- Webapp to identify the cheapest combination of AWS nodes required to support a use case for a specified amount of CPU/RAM.
- The problem is expressed as a linear optimization equation and solved using the PuLP package.

Jun 2020 **Plagiarism Detection using Code Similarity Metrics** 🔗, R
- Automatically identified candidates who plagiarized in a campus selection challenge using code similarity
- Successfully managed to find ∼600 malefactors who were automatically penalized from a pool of ∼2000

Jan 2016 **CompareDF** 🔗, R Package
- Package to compare two datasets, published on CRAN with two major releases and many minor/patch releases.
- Implemented state of the art paradigms in R packaging — CI/CD 🔗, code coverage 🔗 and Docker deploy.
- Has 90+ stars, with 120K downloads, currently averaging ∼1000+ downloads per month.
- Supporting the package for 9+ years, with zero pending issues 🔗 and semantically versioned releases 🔗.

Skills

Languages Python (Expert), R (Advanced), SQL (Advanced), Golang (Intermediate)
Data Engg Kafka, Elasticsearch, TimescaleDB, PostgreSQL, Prefect, Argo Workflows, PrestoDB/Trino
Infrastructure Kubernetes, Docker, Helm, ArgoCD, AWS, GCP, Azure, ELK, Ansible
Frameworks FastAPI, Tidyverse, SvelteKit, Streamlit, Grafana, Kibana, Tableau

Interests

Languages English | Malayalam | Tamil | Hindi | German | Spanish
Fitness Running | Calisthenics | Swimming | Surfing | Scuba Diving
Travel South India | Himalayas | Central Europe | Dubai | Georgia | USA | SE Asia | Japan
Misc Duolingo | WayBetter | Five-Thirty-Eight | The Ken | Codewars | Audiobooks | Seinfeld Strategy