

Vijay Mathew

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Professional Summary

Software architect and hands-on engineer with 20+ years of experience building programming languages, distributed services, developer platforms, search systems, and embedded software. Strong background in TypeScript, Clojure, Java, Scheme, C/C++, and Python, with a track record of leading architecture, shipping production systems at scale, and solving hard systems problems as both an individual contributor and a technical leader.

Core Strengths

- Distributed systems, service architecture, language design, developer tooling, search and content platforms
- Technical leadership, greenfield design, production delivery, performance-sensitive systems, remote collaboration
- Languages and tools: TypeScript, Clojure, Java, Scheme, C, C++, Python, PostgreSQL, MySQL

Professional Experience

Fractl

Apr 2018 – Present

Founding Engineer and Software Architect

Bangalore

- Leading the design of a declarative language and runtime for domain modeling at fractl.io.
- Shaping core language abstractions, execution model, and developer-facing architecture for the platform.

SAP Concur

Dec 2014 – Apr 2018

Principal Engineer

Bangalore

- Led the design and implementation of a scalable identity management and authorization service.
- Built and brought the service to production as the primary engineer; it served 40+ million requests per day at launch.
- Stack: Clojure, Java, Python, MySQL, Elasticsearch, Couchbase.

HappiestMinds

Jun 2012 – Dec 2014

Senior Technical Lead

Bangalore

- Designed and built content indexing, search, and delivery services for Pearson Education's next-generation EPUB reader.
- Implemented the Python SDK for authentication services.
- Stack: Java, Spring REST, Python, Elasticsearch.

Actiance

Apr 2007 – Jun 2012

Senior Systems Analyst

Bangalore

- Designed the information leak prevention subsystem for an enterprise network monitoring platform, including content classification and in-stream policy enforcement.
- Built an RPC framework based on Google Protocol Buffers for efficient transport of captured IM/UC content.
- Delivered network auditing tools and integrations across IBM Sametime, Microsoft SharePoint, and Microsoft OCS; also built a Flex-based visualization tool for communication pattern analysis.

SpikeSource

Aug 2006 – Apr 2007

Senior Software Engineer

Bangalore

- Contributed to Stargate, a build and integration platform, using Java, C++, and Python.

Mindteck

Mar 2006 – Aug 2006

Senior Software Engineer

Bangalore

- Developed embedded software in C and C++ for chromatographic device control systems.

Fischer Systems

Feb 2004 – Feb 2006

Software Engineer

Trivandrum

- Built synchronization products and integration tooling including a BlackBerry Java application, a generic synchronization platform, an LDAP ODBC driver, and Outlook, Lotus Notes, and GroupWise connectors.
- Developed server-side and desktop components in C++, PHP, JavaScript, and Java Swing.

DArts

May 2003 – Jan 2004

Software Engineer

Tiruvalla

- Designed and implemented an Internet kiosk management system in C++ and delivered bespoke web applications on the LAMP stack.

Indusware Solutions

Feb 2001 – May 2003

Software Engineer

Tiruvalla

- Developed end-user products including Planet Zip, Planet Split, and IChat across Delphi, C++, and Java.

Freelance Consultant

Jan 2000 – Feb 2001

Software Engineer

Kozhencherry

- Built and marketed a complete software solution for private banks, including GUI and datastore components, in Visual C++.

Open Source Projects

Agentlang

Ongoing

Contributor

- github.com/agentlang-ai/agentlang-next — A language designed for semantic coding agents – LLMs that translate business requirements into working applications.

Nex

Ongoing

Creator

- github.com/vijaymathew/nex — Practical, expression-oriented programming language focused on clear control flow, contracts, classes, and teachable software engineering discipline.

Slogan

2018

Creator

- schemer.in/slogan — High-level dynamic programming language that compiles to efficient machine code and supports parallel execution.

Reo

2020

Contributor

- github.com/anvetsu/reo — Programming language and environment for data analysis.

Technical Publications & Writings

The Document is the Computer

2026

Author

- The Document is the Computer — Architectural manuscript proposing a text-native interface for personal computing, dissolving the "app" paradigm in favor of composable, document-based systems.

Supercharge Your CLI

2025

Author

- Supercharge Your CLI — A workflow playbook for high-performance command-line habits, focusing on composability and production-ready terminal environments.

Beyond Code / Programming with Nex

2026

Author

- Beyond Code — A series of books and guided tutorials teaching software engineering discipline, grounded in the Nex programming language.

Education

Mahatma Gandhi University

Apr 1995 – Apr 1998

Bachelor's Degree

Kottayam

Major: Financial Accounting with Cost Accounting and Statistics.