

Nivash Sudalaimani

Software Engineer

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Professional Summary

Software Engineer with 4+ years of experience building web and mobile applications across education technology and financial services. Work across Django, APIs, Node js, React and Angular, with ownership from design and testing through production operations.

Technical Skills

- Languages: Python, JavaScript, TypeScript, C#, Java, SQL
- Backend: Django, Django REST Framework, NestJS, PostgreSQL, .NET, WCF, Redis, Celery, OpenSearch
- Frontend and Delivery: HTMX, React, React Native, Angular, RxJS, NgRx, Git, Jenkins, DigitalOcean, AWS, Datadog, PostHog, Grafana, Locust

Professional Experience

Mind Stretcher, Singapore - Software Engineer

June 2025-Present

- Build and operate Dash, a Django platform for student enrolments, classes, payments, teacher workflows, reporting, and mobile APIs; deliver interactive Django/HTMX workflows with server-side permissions and business rules.
- Built an AI powered registration assistant for Dash's public enrolment flow using Django, tool calling, and Server-Sent Events (SSE), helping parents search and compare live classes, validate forms, and navigate the registration seamlessly.
- Secured AI assisted actions with signed, expiring previews, explicit parent confirmation, and transactional server-side validation before class changes, while keeping payments, OTPs, and sensitive form values outside the model's control.
- Improved PostgreSQL reporting by narrowing the data scanned and adding targeted indexes, reducing a full academic-year metrics refresh from roughly 50 minutes to 30-60 seconds in warm runs.
- Optimized Dash API performance by simplifying Django ORM queries and adding targeted PostgreSQL indexes, improving responsiveness for enrolment and class workflows.
- Integrated Stripe payments, Twilio OTP, and TalentLMS accounts into Dash workflows.
- Integrated Zoom with Dash for online and hybrid classes, preventing overlapping meeting assignments and emailing students join details; teachers use a stable host link that fetches a fresh Zoom start URL without a separate Zoom login.
- Built a Celery Beat-scheduled integration that synchronizes student, guardian, and enrolment details from Dash to Respond.io for marketing outreach, using incremental updates, rate-limit handling, and safeguards against duplicate contacts.
- Built Dash Smart Search, a staff-facing AI class finder that uses OpenAI to convert natural-language requests into permission-aware OpenSearch filters for live classes by centre, level, subject, and day, with caching, correction handling, and a rule-based fallback.
- Built a read-only Model Context Protocol (MCP) analytics service that enables approved AI assistants to retrieve Dash reports and operational metrics, secured with OAuth, staff access controls, audit logging, and query and result limits.
- Made Stripe checkout and webhook processing safe under retries by validating payments, locking records, and preventing duplicate processing.
- Diagnosed timeouts and registration errors in a staged 100,000-user load test using Locust and Datadog; traced them to worker bottlenecks and delayed replica reads, then routed affected registration requests to the primary database.

Mind Stretcher, Singapore - Software Engineer (continued)

- Built and operated Celery jobs for data synchronization, notifications, reporting metrics, and retries when external services failed.
- Restored reliable logins by fixing how Django reused connections with managed PostgreSQL pooling; added tests for primary and replica routing.

Mind Stretcher, Singapore - Software Engineer Intern

May 2024-September 2024

- Built React Native/Expo screens and NestJS APIs for authenticated mobile workflows, using Prisma and PostgreSQL.
- Integrated Auth0, push notifications, and CSV imports; improved long mobile lists with FlatList.

London Stock Exchange Group (LSEG), Bengaluru, India - Software Engineer

August 2020-July 2023

- Developed and maintained financial web applications for House Views, Market Insights, and Refinitiv Securitized Derivatives using Angular 12, RxJS, NgRx, .NET Core, WCF, and MySQL.
- Built reusable Angular components and services, delivering pagination, Excel/CSV import and export, and JWT-based authentication while reducing repeated implementation work by 20%.
- Implemented instrument search and filtering, configurable layouts, and comparison pages with Element Framework charts and grids, helping users analyze and export financial instrument data.
- Led deployments of multiple product releases to LSEG Workspace and delivered enhancements, diagnostic fixes, and patches for production applications.
- Increased Jasmine test coverage by 50%, collaborated with QA to resolve defects, and mentored trainee developers through code reviews and technical guidance.

Projects

Tripster - AI Travel Planner

February 2024-May 2024

- Built a travel-planning application using React, Node.js, Express, GraphQL, and MongoDB, with Google Maps, OAuth authentication, drag-and-drop itinerary editing, and third-party place and weather APIs.
- Integrated OpenAI to generate personalized itineraries from traveller preferences and display recommended activities and locations on an interactive map.

Education

National University of Singapore

Master of Computing, Computer Science | Aug 2023 - Jan 2025 | CGPA: 4.21/5.00

Coursework: Data Structures and Algorithms; Software Development Fundamentals (Python); Enterprise Systems Architecture Fundamentals; Artificial Intelligence; Data Analytics; Stream Processing; Big Data Systems for Data Science.

Vellore Institute of Technology

BTech, Electronics and Communication Engineering | Jul 2016 - Sep 2020 | CGPA: 8.54/10.00

Coursework: Object-Oriented Programming; Java Programming; Computer Communication; Computer Organization and Architecture; Statistics; Linear Algebra; Neural Networks.

Research Publication

- Co-authored research on spectrally efficient frequency division multiplexing, published in the International Journal of Innovative Technology and Exploring Engineering.