Diljot Singh

Technical Lead | Python, Django, FastAPI, AWS

Mohali, Punjab, India | contact@diljotsingh.com | linkedin.com/in/diljots99 | github.com/diljots99

SUMMARY

Technical Lead with 5+ years building Python and Django backends for US health tech, insurtech and SaaS products. Leads a team of 5 engineers (up to 9), reviews code, runs releases and scopes new work while still shipping production code, and collaborates directly with client CTOs, founders and product staff. On a US AI benefits enrolment platform, owns the agency forms feature from design to production, cut a 44-page form read from 17.1 s to about 3 s and reviewed about 506 pull requests. Promoted from trainee to Technical Lead in 2 years 2 months.

SKILLS

Leadership: Team leadership, code review, release management, technical specifications, system design, estimation and presales, mentoring, hiring, Jira, Scrum

Languages: Python, SQL, JavaScript, TypeScript, C#, Java

Backend: Django, Django REST Framework, FastAPI, Pydantic, SQLAlchemy, Celery, async Python, Flask, Node.js, REST APIs, GraphQL

Data: PostgreSQL (query tuning, advisory locks for concurrent writes), Redis, MySQL, MongoDB (NoSQL), SQL Server

Cloud and DevOps: AWS (CDK, Lambda, S3, CodeBuild), Docker, Docker Swarm, GitHub Actions, CI/CD, Terraform, Azure DevOps, Linux, Sentry and Datadog monitoring

AI: LLM integration (Anthropic Claude, OpenAI), Pipecat voice agents, Twilio, AssemblyAI

Testing: pytest, Playwright, Cypress, k6

Security: SAML 2.0, OAuth 2.0, Okta, Auth0, JWT, MFA, field-level encryption, HIPAA

Frontend: React, Next.js, Angular, Vue

Spoken languages: English, Hindi, Punjabi

EXPERIENCE

CodeArrest Softwares Pvt. Ltd. — Mohali, India (remote)
Technical Lead — Jan 2025 to Present

- Lead a team of 5 engineers (up to 9) working inside US health tech and SaaS client teams; assign work, review code, handle escalations and plan capacity while still shipping production code.
- Reviewed about 506 pull requests from a US client's engineers (460 merged) across platform, legacy Django and DevOps repos, and wrote the pre-review checklist each pull request passes before the team lead sees it.
- Ran QA to production releases with release notes, risk tables and pre-deploy checklists, and blocked an unsafe partial release when production was 182 commits behind QA.
- Worked on and managed four 2025 client builds with two engineers: a print layout service, a legal e-discovery platform, a Medicare agency CRM and a wearable health app.
- Scope and estimate new client work and write use case documents and technical diligence briefs for presales.

Mechlin Software Technology Pvt. Ltd. — Mohali, India
Technical Lead — Apr 2023 to Jan 2025
Software Development Engineer II — Mar 2022 to Mar 2023
Software Development Engineer I — Aug 2021 to Feb 2022
Software Development Trainee — Feb 2021 to Jul 2021

- Promoted from trainee to Technical Lead in 2 years 2 months and helped the company set up its team lead path.
- As Technical Lead, managed engineers' performance, mentored on best practices, handled client escalations and kept coding.
- Started the company's time tracking SaaS alone, set its architecture and led its team part time while working full time in a US insurtech client's team.
- Mentored the 2022 Python and Node.js trainee batch and wrote the company's technical hiring tasks for Django, Angular, Node.js and .NET roles.
- Built Solidity contracts for a gold-backed stablecoin and Django and Node.js backends for client marketplaces and data products as an engineer.

SELECTED PROJECTS

AI Benefits Enrolment Platform Jul 2025 to Present

US health tech startup (client engagement)

- Owned the agency forms feature as client contact and primary engineer, from high-level design and written spec to production on a new FastAPI and PostgreSQL platform; took five go-live Medicaid and SNAP forms from unpublished to live in 3 days.
- Cut a 44-page state Medicaid form read from 17.1 s and 533 MB to about 3 s and 250 MB by profiling the PDF pipeline, which unblocked publishing for every form and program.
- Built LLM features on Anthropic Claude and a Pipecat, Twilio and AssemblyAI phone agent with call scripts in 9 languages, and replaced silent 14.5 hour AI pipeline stalls with a clear failure within about 4 hours.

Aging-in-Place Insurance Platform Sep 2022 to Mar 2025

US insurtech, Series C (client engagement)

- Led SAML 2.0 single sign-on integrations with partner insurers' engineering teams (Okta, Auth0, OAuth 2.0), owning the SAML design and running each partner's integration calls.
- Moved features from a C# .NET service to Django one at a time while both apps stayed live, and moved an acquired company's Windows and Azure .NET codebase onto Linux containers.
- Built the Django REST API behind a new member portal (1,779 commits, 303 merged pull requests) and took a weekly on-call shift.

Workforce Time Tracking SaaS Nov 2021 to Mar 2025

Company product

- Started the backend alone and set its architecture (Django, DRF, Channels, Celery, PostgreSQL, Redis), then led the team that grew around it; 1,450+ commits and 390 merges.
- Designed multi-tenant provisioning with one PostgreSQL database per customer and Stripe subscriptions, deployed with Docker Swarm behind Caddy with TLS for each customer subdomain.

Test Automation SaaS Dec 2023 to Nov 2024

Company product

- Packaged the product into 6 Docker service images across dev, stage and production, moved it to Docker Swarm and deployed it on AWS.
- Extended its GitHub Actions CI/CD with per-service image builds, build caching and a self-hosted runner.

EDUCATION

Sri Guru Granth Sahib World University Fatehgarh Sahib, India

B.Tech, Computer Science and Engineering, First Division, CGPA 7.98/10 Jun 2021

Relevant coursework: Data Structures and Algorithms (9.1/10), Design and Analysis of Algorithms, Object Oriented Analysis and Design, Database Management Systems, Artificial Intelligence

CERTIFICATIONS

Backend Engineering Program (Python), AirTribe, in progress Oct 2026

Python for Data Science, IBM Aug 2020

AI with Neural Networks and Fuzzy Logic, C-DAC Mohali (six weeks) Jul 2019

AWARDS

Mechlin Quarterly Award (one engineer chosen per quarter), twice Q4 2021, Q4 2022