MANISH RASTOGI

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GitHub O

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Resume

Professional Summary: Accomplished Senior/Staff Backend Engineer with 9+ years of experience architecting, developing, and scaling high-performance distributed systems and AI-powered platforms. Proven ability to lead projects from conception to deployment, leveraging expertise in Python, LLMs, microservices, cloud computing (AWS/Azure), and various data stores. Adept at optimizing system performance, reducing costs, and delivering robust, scalable solutions both independently and as a team leader.

EXPERIENCE

Software Engineer, Docsum (Contract)

Feb 2025 to May 2025

- Engineered a scalable, **Hatchet**-based asynchronous task processing system, incorporating **monitoring and audit capabilities** to handle high-volume workloads efficiently.
- Architected the external apps integration framework for integrating Google Drive, OneDrive and other such apps.
- Built a system creating knowledge graphs to identify inter-document relationships using pgRouting and LLMs.
 Python, FastAPI, Hatchet, Supabase

Founder, Twing (https://trytwing.com)

Oct 2022 till Dec 2024

- TwingBot: Al powered Slackbot for task management in Slack leading to 30+ mins saved each day. Used by 200 people. (trytwing.com/twingbot)
- Legaling: RAG based system for Legal Research and Case Management using Azure Vector DB, OpenAl and Search Service. (legaling.trytwing.com)
- TwingParse: Al-powered scalable system for template based data extraction from diverse documents using OCR, language identification, and parsing algorithms.
 (twinglabs.com)
- TwingTranslate: All powered translation system focused on Indian Languages which can handle scanned and digital documents using textract, tesseract and languagetect tools. (translate.twinglabs.com)
 - Python, AI, Postgres, Celery, AWS, Azure, LlamaIndex, LangChain

Early Tech Lead, Salarybox

April 2022 to June 2022

Reduced AWS and infrastructure spend to achieve a 30%
 cost reduction by seamlessly upgrading the servers and
 disks to ARM based servers and rightsizing them by running
 performance tests.

EDUCATION

August 2012 to June 2016

BACHELOR OF TECHNOLOGY

INFORMATION TECHNOLOGY
Nirma University

TECHNICAL SKILL SET

Programming Languages Python, Javascript/NodeJS, Go
Frameworks Django, Flask, FastAPI, Jquery, React

Al and LLM Toolkit GPT, Claude, Llama, Azure Vector DB, LangGraph, LlamaIndex

Database & Caching MySQL, PostgreSQL, Supabase, Redis

DevOps, Cloud & CI/CD EC2, ECS, S3, Lambda, RDS, ELB, Azure VM, Blob, Docker, Github CI

Tools

Cursor, Vercel, Render, Posthog

- Found and fixed 5-6 major processes in the system to achieve system stability by eliminating DB locks and unnecessary calls. Brought down latency from 30s to 1-2s and DB locks from 300 to 2-5 per day.
- Implemented a Notification Engine providing real time notification to users peaking at **3000 notifications/min**. Used multiprocessing with Redis, queues and Batching while following a dynamic rule set implemented in Redis.
- Led and mentored a team of 6 engineers, delivering key features using Agile methodologies.
 Python, Django, Redis, Postgres, Celery, AWS

Senior Software Engineer, Instawork

October 2021 to March 2022

- Implemented fraud detection mechanisms by creating a system to analyze the average tipping data by a user to ensure it stays within parameters.
- Developed the tipping feature to tip the hired staff with multiple touch points and tip calculation based on ratings provided increasing tipping by the clients upto 15%.
 Python, Django, Templating, JS

Software Engineer, Quadeye Securities

January 2017 to December 2020

- Architected a low latency and customizable application for traders to visualize massive amounts of data(upto 3000 data points/second) and interact with it by setting alerts and sending commands to strategies for dynamic changes.
- **5x improvements** in speeds by improving the codebase and removing inefficiencies in the database by moving to web sockets, caching with Redis and implementing a queue processing system to offload I/O blocking heavy tasks. System capability increased **from 5k to 1 million events** per day.
- Managing a team of over 10 engineers along with hiring and training them.

HTML5, CSS3, JQuery, Python, Django, Redis, MySQL, Django Template, AWS, Celery.

KEY AREAS OF EXPERTISE

Data Structures and Algorithms
Distributed Systems/ REST API
Al Systems
Backend System Development
DevOps