

TUSHAR YADAV

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Open to Relocate

PROFESSIONAL SUMMARY

Backend Engineer | AI Enthusiast | Cloud-Native Problem Solver

Passionate backend engineer with 4+ years of experience building scalable, high-performance systems across cloud platforms like AWS and Azure. I specialize in Python, FastAPI, and distributed architectures, with a growing focus on integrating AI/LLMs to unlock intelligent workflows. From crafting RESTful APIs to deploying AI-powered solutions in production, I thrive at the intersection of backend engineering and real-world impact. Excited to bring innovative ideas, clean code, and deep system thinking to fast-moving teams solving meaningful problems.

TECHNICAL SKILLS

Programming Languages: - Python, TypeScript, JavaScript
Frameworks: - Django, FastAPI, Node.js, React, Apache PySpark, Kubernetes
Databases: - SQL Server, PostgreSQL, MongoDB, Cassandra, Redis, Vector DB, OpenSearch, DynamoDB
Cloud Services: - Microsoft Azure(Blob, SQL Server, App Service, Synapse Analytics), AWS (S3, EC2, ELB, CodeBuild, Lambda, CloudWatch, EMR)
AI/ML : - Prompt Engineering, LLMs, RAG, Transfer Learning, Deep Learning, NLP
Key Skills: - Backend Development, Data Engineering, API Development, NLP, Database Management Systems, Data Pipeline, Performance Tuning, SQL Query Optimization

EXPERIENCE – 4YEARS

Zavvis Technologies Inc. Senior Software Engineer (Finance)

San Jose, CA, United States
May 2025 – Present

- Designed and deployed an **AI-driven CFO agent** using Python, FastAPI, SQL, and time-series forecasting to automate 12-week cash flow projections, detect liquidity risks, and generate CFO-grade insights with severity-based prioritization.
- Built scalable **backend architecture** with **RESTful APIs** using FastAPI and data pipelines to power ML-driven recommendation engines, integrating AR/AP heuristics, optimization algorithms, and automated scheduling of financial actions.
- Developed and integrated an **LLM-powered AI chatbot** (OpenAI/Claude) capable of parsing natural language queries from CFOs, extracting relevant AR/AP, recurring expense, and revenue data, and performing **real-time financial analysis** on cash flow, DSO, DPO, and CCC metrics.
- Implemented a **speech-to-text pipeline** using Whisper API to allow CFOs to speak queries to the chatbot, converting voice to structured queries, retrieving relevant financial records, and delivering **instant, data-backed analytics** on 12-week forecasts and working capital health.

Interco Software Developer Intern (Metal Recycling and Sales)

St. Louis, MO, United States
May 2024 – August 2024

- **Reduced bug reports by 20%** by building a Python-based system to validate usage data and generating business reports.
- Boosted operational efficiency **2.5x** by developing high-performance **FastAPI** endpoints, enabling new service offerings within existing infra.
- Cut deployment time by **60%** by implementing CI/CD pipelines with **Azure DevOps, Docker**, while resolving technical debt.
- Improved **ERP web app** search performance by 50% through **SQL query optimization**, indexing and **stored procedures**. Optimized concurrent data processing in a web crawler by implementing multithreading, significantly reducing processing time.

ITC Infotech (on-site at ZS Associates) Senior Software Engineer (Healthcare and Pharma)

New Delhi, India
November 2021 – August 2023

- Enhanced API performance and scalability by **40%** by engineering **RESTful** services with **Flask, Azure Functions**, and **API Gateway**, optimizing response times and security.
- Ensured 99.9% uptime and high availability by deploying backend services for web apps using **BitBucket, AWS CodeBuild, CodeDeploy, EC2, and ELB with Flask**, while integrating **CloudWatch** for real-time monitoring and logging.

- Accelerated data processing by **50%** by creating and managing data pipelines with **Azure Data Factory** and Stored Procedures, ensuring seamless data movement from multiple sources to **Azure Synapse** and **Azure SQL Server** with data integrity and performance optimization.
- Strengthened system security and compliance by implementing **OAuth 2.0**, **Azure AD B2C services**, **JWT auth**, and **role-based access control (RBAC)**, mitigating unauthorized access risks.
- Reduced SQL query execution time by **60%** by optimizing complex queries, implementing indexing strategies, and developing **stored procedures in SQL Server**, significantly improving data retrieval efficiency.

L&T Technology Services Software Engineer (Oil and Gas)

Vadodara, India
May 2019 - November 2021

- Increased data quality and reliability by **70%** by identifying patterns from unstructured documents and extracting key features using **Natural Language Processing (NLP)**, reducing **manual processing time by 25 hours per week**.
- Improved business strategy effectiveness by **35%** by leveraging **Power BI** and **advanced SQL queries** to analyze complex datasets in **SQL Server**, integrating **pandas** and **NumPy** for advanced data processing and actionable insights.
- Achieved **80%** accuracy in statistical analysis by automating **web scraping** using **Selenium**, extracting key features from websites.
- Reduced manual data entry workload by **60%** by executing **tabular data extraction from PDFs** using **PDFMiner**, **PyPDF2**, and **OCR**, exporting structured reports to predefined formats, ensuring accuracy and efficiency.

EDUCATION

California State University Fullerton, USA - **Master** of Science, Computer Science

Aug 2023 - May 2025

SRM Institute of Science and Technology - **Bachelor** of Technology, Information Technology

June 2015 - May 2019

RECENT PROJECTS

- **AI-Powered Interview Coach** - (*WebRTC, MongoDB, Whisper API, Deepsearch, LangChain, GPT-4, OpenSMILE, OpenCV*)
Designing and developing an AI-powered mock interview coach using FastAPI, OpenAI, RAG, LangChain, and Whisper for real-time speech transcription, NLP-based response evaluation, and tone analysis with OpenSMILE. Built a responsive frontend in Next.js and Tailwind CSS with WebRTC integration for live interview sessions and performance insights.
- **PasteIt – Google Chrome Browser Extension** - *getpasteit.com – (JavaScript/ Next.js)*
PasteIt is a browser extension that enhances your clipboard functionality. It allows you to store multiple copied items, reorder them, and paste them easily into forms or documents.