SHANTANU PATNAIK

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Github | LinkedIn | Stackoverflow | Portfolio

Experience

Brandie | *Senior Backend Engineer — Lead Backend Engineer*　　　　Apr 2024 – Current
- Leading projects in Backend, AI, DevOps and System Design.
- Developed a system to fetch statistics from popular social media platform utilizing proxy services.
- Architected and implemented complete monitoring and logging for the backend system which helped in **preventing 100% increase in Infra cost** by catching the pain points in the system.
- Engineered an AI-assisted developer workflow integrating Claude with Slack and New Relic, enabling automated error triage and accelerated debugging cycles.
- Led the team in architecting and implementing a novel backend system featuring Internal Load Balancing and Caching, leading to a **10x surge in New Relic Apdex score** and **a 50% reduction in overall backend response time**.
- Developed and deployed Brandie AI, **an multilingual Agentic AI system** handling **10,000 daily invocations globally across 55 countries**. My role involved leading data pipeline creation, prompt engineering, vector database integration, and workflow establishment for tech support, Q&A, and statistical queries.
- Led the team in developing additional features for the Brandie AI System, including autonomous campaign creation, caption generation, and curated post capabilities, utilized by both users and administrators, **collectively achieving over 1 million engagements globally**.
- Formulated and executed a database migration strategy that **averted a 300% surge in database expenses** and significantly enhanced system-wide query performance.
- Directed infrastructure enhancements for media asset delivery services, **leading to a 50% reduction in operational costs** while accommodating significant growth in user engagement and an expanding user base.
- Led the migration of servers & databases from AWS to GCP for utilizing the benefits of **Google for Startup** Program.

Tars | *Full Stack Engineer — Product DevOps Engineer*　　　　Mar 2021 – Sep 2023
(Intern: Mar 2021-Aug 2021 — Full Time: Sep 2021-Sep 2023)
- Working in the MERN stack, Python, AWS services and Monitoring Tools.
- Led the development and scaling of WhatsApp services at Tars, overseeing new features, integrations, and billing.
- Spearheaded the integration of the SMS channel for Tars chatbots with Twilio, completing the project within two days to secure a customer.
- Managed the integration of the Monday.com dashboard with the Tars WhatsApp chatbot under a tight deadline, successfully closing a high-value customer deal.
- Spearheaded process improvements as interim Team Lead within the engineering team.
- Developed and submitted SLA documents for enterprise accounts.
- Implemented New Relic for comprehensive infrastructure and application monitoring, including log forwarding and anomaly alerts.
- Provided DevOps support, including the setup and launch of new servers, ALBs, and reverse proxies, along with managing DB servers and debugging system issues.
- Worked on Tars-Vodafone Qatar FIFA 2022 project where took responsibility for the backend and DevOps aspects and ensured the successful completion of the project.
- Worked on AWS Security hub to implement the security remedies throughout the cloud infrastructure which enabled the team to initiate partnership talks with AWS.
- Successfully completed the first version of Tars Prime with the team where the initial integration AI tools and services within the product took place.

Internships

SM Enterprise | *Intern in Industry Automation*　　　　Jun 2020 – Sep 2020
- Development in the microcontroller and the embedded circuit for making an IOT device.
- Developed the web application (Full Stack) and REST API for controlling the device from anywhere in the world.
- Integrated Long Polling and Email Verification.
- Domain registration with server and email hosting.
- Making the web app PWA compatible.
- Integrated Amazon Alexa with the device for LAN operations and used Alexa Skills Kit and AWS Lambda for WAN operations.

ONGC | *Intern in Networking and Communications*　　　　Jun 2019 – Jul 2019
- Learned working of ONGC's InfoComm station.
- Developed HRMS application with Server-Client integration using C++ and Java for employee management and server establishment.

Certifications

NVIDIA: Efficient Large Language Model (LLM) Customization (1aBaTkW7T3edMqYyBrBHRw)

Skills

Stack
- AWS
- Prompt Engineering, OpenAI, Llama
- Full Stack Web Development
- REST API, GraphQL, Microservices
- IOT, Industry/Home Automation
- Web Automation, Scraping (+ Social Media)
- CDN, CI/CD with AWS
- NewRelic, SRE, AI-assisted Observability
- AI-augmented Developer Tooling, AI DevOps Automation

Frameworks/Tools
- Docker, Git, Linux, Bash, Nginx
- GraphQL, REST
- MERN, LAMP
- React Native, Nextjs, Socket.io
- Microsoft VS Code, VIM
- Arduino, ESP8266, NodeMCU
- JEST, Mocha-Chai, Jmeter
- Mongoose, Postman, JWT
- RabbitMQ, SQS
- Twilio
- Slack Integrations/Bots, Claude API

Database
- MySQL, SQLite
- PostgreSQL, Supabase
- MongoDB
- Neo4J
- Firebase

Education

Amity University, Jaipur
B.Tech in Computer Science and Engineering
June 2017 – May 2021

Projects

AI Voice Assistant | GitHub
Feb 2024 | Node JS, Twilio, Google Dialogflow, NLP

Tars Prime | Tars
Feb 2023 | Node JS, Python FastAPI, OpenAI

Whatsapp Automation | GitHub
Jan 2021 | Python, Selenium, Tkinter, SQLite

Paytm Balance Notifier | GitHub
Jan 2021 | Python, Pyttsx3, Selenium, Web Scraping

Alexa Skill For Home Automation | GitHub, SM Ent.
Jan 2021 | Python, AWS Lambda, ASK, REST API

Program Automation Tool | GitHub, SM Ent.
Aug 2020 | Python, File Handling

Emergency Boot Up System | SM Ent.
Jun 2020 | Arduino IDE, Arduino