ANOOP KARNIK DASIKA

BACKEND ENGINEER WITH SPECIALIZATION IN DATA ENGINEERING, DEVOPS & AI

I am a driven individual with the ability and passion to learn new skills, tools, and technologies. My passion includes building end-to-end products for myself to improve my life, learning, and productivity. I prefer working on creating backend services for/using the latest technologies like LLMs.

Languages - Python, Java, Javascript, Sql, Html, Css
Backend stack - Flask, Springboot, bash script, kafka
Data engineering stack - Neo4j, Elastic Search, Airflow, Pandas, Excel(VBA)
DevOps - AWS (s3, rds, ec2, route 53, ecs, iam, lambda, airflow, opensearch), Git, Github actions, Docker
AI - chatgpt, prompt engineering, machine learning
Frontend stack - Reactjs, Tailwindcss, Tkinter

WORK EXPERIENCE

SENIOR SOFTWARE ENGINEER
May'23 - Present

Mpowered Health

Support Bot Service (Individual Contribution)
Python, Flask, Reactjs, Spreadsheet, Chatgpt

Created an Assistant for the company with all FAQs and documents attached on how to use various features of our app. Using the assistant API in a flask service we create new threads per user and also store the threads and messages in db. Created a frontend chatbot in React where I can initiate chats where we get replies from this chatbot.

Support Assistance with Call Support (Individual Contribution)
Rocketchat, Jitsi, reactjs

Build a customer support service for the company using open source tools and frontend in our consumer app.

Data Definition Service (Individual Contribution)
Advanced Excel, Google Spreadsheet, VBA, Google App Script, Airflow

Created a Data Definition Excel workbook and then a spreadsheet, where a client can define data and based on selected options more properties and sheets are displayed for the client to fill so that a structured data dictionary is given to us, from where we can trigger a airflow dag for creating partner specific ingestion environments.

Fhir Data Validation Service (Individual Contribution)
Python, Flask, fhir, kafka, github actions, Google Spreadsheet

Created a Flask Service which consumers raw fhir data from a kafka topic and checks against fhir resource fields based on profiles created in what is present and what is not present in each record for each resource.

Enterprise Matching Patient Index Service (Individual Contribution)
Java, Springboot

Created a Springboot backend service which triggers when new patient enters from any enterprise, we run the matching backend service to find exact and probabilistic matches and take actions like adding new data or nudge the consumer to verify, etc.

Cloud Fhir Module (Part of 3-man Team)
Java, Springboot, Kafka

Standardize Fhir Data using a defined config and migrate it from one Fhir server client to Azure Fhir client with references updating in a schedule.

Soft Related Records Services (Individual Contribution)
Java, Springboot, Kafka, Python, Flask, Neo4j

Every time a fhir resource is ingested or updated, from a kafka topic flask service picks up the data and stores it in neo4j server as a node and connects its with related records based on predefined rules. A springboot service can get all these connected resources with a single resource id.

SOFTWARE ENGINEER II
June'21 - May'23

Mpowered Health

Data Ingestion Pipelines (Individual Contribution)
Python, SQL, Elastic Search, Airflow, RDS, S3 Ec2

- Members' data files with the amount available to them which is weekly taken from 6 insurance companies and ingestion into our Postgres database with success or error notification mails sent to our clients.
- CSV files for 6 insurance companies containing practitioner and organization data to be connected with the pricelist. These CSV files are first standardized, mapped to fhir fields, converted to fhir json using python fhir client, and ingested to fhir framework.
- Using the Defined configuration provided by Partners in the UI, which is stored in aws rds, creating partner-specific, data-specific ingestion pipelines based on configurations provided in UI and mapping and validation files filled by BA in our company. The ingestion pipelines validate, standardize and ingest data into fhir server.
- Created a data ingestion pipeline for ingestion of pricelist files(hundreds of GBS of deeply nested data that contain the price of service per npi per insurance) for 6 Insurance Companies in the US. The data is first read using JSON (parallel processing of JSON) as 1 file is more than 100 GB and then stored in elastic search where it has mapped to provide various levels of aggregations.

Workflow and Rules Engine Service (Individual Contribution)
Java, Springboot, SES, Rds, Camunda Workflow Engine, Kie Rules Server

- Created multiple consent workflows using the Camunda workflow engine with a complex combination of user steps (variables are inputted) and backend processes to get consent for data sharing between multiple users.
- Created a Rules Server in Kie where based on around 1000 rules defined by BAs in a spreadsheet, we use the Camunda workflow engine to find the which of the conditions and their related resources are sensitive (pregnancy, sexual diseases, etc related) and tag them.

ANALYST
Sep'15 - Jul'17

Latent View Analytics

Structuring Marketing Campaigns for the next year based on analysis of campaigns from the previous years and providing insights using tableau dashboards. Create sales conversion vba, advanced excel tools. google play store web crawler to scrap all records.

PROJECTS

Chatgpt Flask Client {}
Python, Flask, ECR, Ec2, Route 53, Github, Github Actions, Postgres

Created a chatgpt client, which works with all APIs chat, chat with an assistant, text to speech, speech to text, translate, generate an image, get vision description, and store it in Postgres.

Notion Flask Client {}
Python, Flask, ECR, Ec2, Route 53, Github, Github Actions, Postgres

Created a Notion API Client which handles crud operations for database and page. It also handles scheduled backend tasks which control updating monthly budget, movie/tvshow/book details in notion, voice to page creation in notion, youtube video to page creation in notion on schedule.

Api Flask Gateway {}
Python, Flask, ECR, Ec2, Route 53, Github, Github Actions, Postgres

Created an API Gateway Service which resides in ecr, ecs, and ec2 instance with an application load balancer and route53.

Automated Service Creation {}
Python, Flask, Tkinter

Automated Service creation using apis of backend (flask, springboot) or frontend (react js, react native) in local, create GitHub repo, ecr repo and create a ecs cluster and push the service to it or pull and run in in ec2 instance. Created a UI using tkinter, with the above api calls.

Bayesian Planner {}
Java, Javascript, Springboot, Reactjs, ReactNative

Created an Android app and a website with react native and react js respectively. It is a productivity app with a spring-boot backend which has login functionalities, habit tracking, task tracking, goal tracking (created by rule management system), note taking, journal entries, etc.

EDUCATION

MS IN COMPUTER SCIENCE (AI SPECIALIZATION)
2018-2022

IIIT Hyderabad
CGPA 8

Publications

- *CB+NN Ensemble to Improve Tracking Accuracy in Air Surveillance (Proceedings of the AAAI Conference on Artificial Intelligence · Jun 1, 2022)*
- *An Ensemble Learning Approach to Improve Tracking Accuracy of Multi-Sensor Fusion (Neural Information Processing. 27th International Conference, ICONIP 2020 · Nov 18, 2020)*

Decrease Tracking Errors in Air Surveillance Software
Python, Flask, Tkinter, Websockets

Designed an ensemble learning approach with a neural network and catboost algorithm for each kind of error detected to predict if a particular data point tracked shows this type of error or not which increased tracking accuracy. and is currently in testing in the Air Force in India bases before implementation. We have designed a frontend Simulation application in tkinter Python for air surveillance.

Courses

Statistical Methods in AI, Topics in Applied Optimization, Digital Image Processing, Computere Vision, Deep Learning - Theory and Practise, Social Computing

B.E. (HONS) IN MECHANICAL
2011-2015

BITS PILANI
CGPA 7.28

Courses

Computer Programming, Probability & Statistics, Human Resource Development, Principles of Economics, Project Appraisal, Engineering Optimization, Fundamentals of Financial & Account, Functions & Working of Stock Exchange, Security Analysis & Portfolio Management, Journalism

CERTIFICATIONS

- Machine Learning Specialization - Coursera
- Deep Learning Specialization - Coursera
- Personal Finance Specialization - 1% Club

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