

Venkata Kautilya Thanneeru

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Hyderabad, Telangana.

Summary

Structured Python Developer bringing almost 4 years of comprehensive experience developing LLM agents/assistants, back-end components & ETL Pipelines, connecting applications with other web services and supporting front-end developers, Tech-savvy and methodical professional possessing strong understanding of front-end technologies. Familiar with server-side template languages.

Skills

Languages and framework: Python, JavaScript, Java, C++, Golang, node.js, SQL, PySpark, Pandas, Matplotlib Django, Django Restframewrok, Flask, Angular, Vue.

Tools and technologies: Agile/Scrum, Git, GitHub, Test Automation, Amazon Web Services, Jenkins, JIRA, AWS, Kafka, System Design, Azure OpenAI Chat.

Professional Experience

Software Engineer

Simplify3x

August 2024 to July 2025

Bengaluru, Karnataka, India

- Projects
 - Web application **chat bot** for Test automation and test data management **using AI**(Product name: AITDM, Qgen)
 - AI agent to scan and review the code base and provide insights like potential bugs, vulnerabilities and improvements(Product name: **AI Scanner**)
- Involved in developing the web application from end to end using **REACT** for front-end, **Python (fast-api)** for back-end, **MongoDB** as database and **Redis** for caching.
- Worked on developing 3 custom data tables to display data using **MUI**
- Utilized the chat completion endpoints of the **LLM** to get the intent out of user queries.
- Developed a notification service using **AWS SNS**, which notifies the user when a test case is done executing.
- Worked on creating **synthetic data** (to create **837 EDI** files) from user prompts by using **LLM**.
- Modified the inbound rules for **AWS redis** instance so that the dev instance of the BE can communicate with **redis**.
- Created **typing animation** in FE when displaying text received from BE.
- Used **GitLab** and **Azure Repos** to maintain version control for the code base.
- Wrote **media queries** so that the front-end looks consistent across all device sizes.
- Developed a stand alone AI Scanner using chat completion endpoints using **node.js** and **Azure Open AI LLM**. (**gpt-4**, **gpt-4o**, **gpt-3.5-turbo**).
- Wrote a **custom file parser** to parse the code files using **AST trees**.
- Wrote a **custom code chunker** which chunks code based on the **LLM's context window limit**

- Created a **custom LLM assistant** which responds with **potential bugs, improvements** and **vulnerabilities** by using **summarization technique** because **chat completion endpoints** of **Azure OpenAI** deployments are **stateless**.
- Handle the **429** error (token limit expiry error) by calculating the token regeneration time for the current chunk based on **LLM's** token regeneration rate (token regenerated/second).
- Merged the results of different **chunks** of same file in to a single chunk using **node.js**
- Designed the architecture of the **AI scanner** by using **Kafka** so that a maximum of 1 **AI scan** is in progress for 1 organization at any given point of time.
- On boarded the application to **OKTA** for authorization and authentication.
- Created a custom **JWT authenticator** in the back-end to authenticate all incoming requests.
- Recommended to develop a custom test case recommendation system to suggest similar queries to users based on **cosine similarities** and **Euclidean similarities** and **Docker** for local development.

Tech stack: Python, Node JS, flask, fast-api, MongoDB, MySQL, Redis, Javascript, REACT, HTML, CSS, Docker, K8s, AzureChatOpenAI, Argo CD, GitLab, Postgres, AWS, OKTA, okta-react, kafka.

Software Engineer

CBRE

October 2022 to November 2023

Richardson, Texas, USA.

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- Projects
 - Internal facing invoice generation web application(Product name: Finishline)
 - Management facing performance review web application which triggers Pyspark jobs(Product name: Broker Dashboard)
 - Fixed **25% of CVE** raised by Snyk major one being SQL injection.
 - **Reduced the cost by 40%** by migrating the database to AWS RDS.
 - Fixed few bugs in a microservice written in **Golang**(beego and beego/orm)
 - Implemented 2 custom **Kafka** pushers and integrated it with the application;
 - Engineered backend of the web application and most of the Pyspark pipeline.
 - Added minor features in the Front end using Angular TS.
 - Created **XML** file to share with 2 different finance systems(RECD and Peoplesoft).
 - Engineered Python modules to view and connect with the Apache Cassandra instance.
 - Took part in the entire lifecycle of the projects, including Design, Development, Deployment, Testing Implementation, and support.
 - Collaborated with a team of 5 to develop an **ETL pipeline** on **AWS EMR** with **YARN** as the resource manager.
 - Worked in a **Test-Driven-Development (TDD)** environment.
 - Strong working knowledge in developing Restful web services and Micro Services using **Golang**
 - Worked in **agile** methodology using **Jira**.
 - Created reports on existing translations in the back end which were Engineered using **Django** .
 - Fetched data from various sources like **snowflake**, log files, **AWS RDS** and **AWS S3**.
 - Exceptional skills in developing user-friendly, simple, yet effective web-based applications.
 - Extensive experience using version control systems like **Azure repos**, **GitHub**, and **GitLab**.
 - Implemented **Bash**, **Python** scripting to Automate many day-to-day tasks.

Tech stack: Python, Django Rest Framework, Pandas, PySpark, matplotlib, Unittests, Typescript, Angular T.S, HTML, SCSS, Golang, beego, beego/orm, Postgres, Kafka, AWS RDS Aurora PostgreSQL, Docker, Snyk, Xml, Jira.

Python/PySpark Developer

Capital One

June 2022 to October 2022

Richmond, Virginia, USA.

- External facing data sharing application(an **ETL pipeline**)
- Extracted data from databases of various internal applications like customer spending analysis team, loan processing team, refinancing team, etc.
- Transformed the data by applying map-reduce in **PySpark** and performed validations on the transformed data
- Loaded the data into the **One Lake** (Capital One's version of **DataLake**)
- Engineered and implemented a highly optimized application database schema, resulting in a **reducing data retrieval time by 25%**.
- Used behave (**Python** library) to follow **Acceptance Test Driven Development**(ATDD)
- Engineered a custom DLP solution tailored to Capital One's unique requirements.
- Facilitated the creation of granular policies to govern data usage and transmission both within and outside the organization.
- Conducted ongoing monitoring and optimization efforts to enhance the effectiveness of the DLP solution
- Experience creating AWS IAM Roles and attaching Policies
- Used web services like **Amazon Web Services (AWS) EC2, AWS S3, Cloud watch**
- Created a pipeline to interact. With **AWS RDS** to update, create schema of the **Aurora Postgres** database.
- Created **REST API** endpoints to perform CRUD operations on the database containing anomaly reports data using Django Rest Framework
- Provisioned infrastructure on **AWS** using a terraform like tool called One pipeline.

Tech stack: Python, Pyspark, Flask, Behave, Flyway gear(wrapper around alembic), One pipeline(Built on cloud formation stack and Jenkins), GitHub, AWS IAM, AWS RDS, EMR, EKS, S3, Cloudwatch, Postman, YARN.

Web Application Developer

FutureX

October 2021 to March 2022

Austin, Texas, USA.

- External facing **web application/API** endpoints used to manage 7 different **data encryption** tools offered by Futurex
- Worked on automating the task of self-signing and signing the **RSA CA bundle** with **CA authority**
- Managed various user, service, key and certificate information
- Created Unittest cases.
- Implemented the **caching** system using **redis** in the **middleware** written in **Flask**.
- Automated 2 manual tasks like creating a cryptotunnel using a public API endpoint and renewing the certificates used in the cryptotunnel-guardian
- Updated the email **HTML** template using **Jinja2**.
- Fixed broken **jenkins** builds.
- Supported **QA** testers

Tech Stack: Python, Flask, JavaScript, Vue.JS, HTML, CSS, flask-sqlalchemy(ORM), Unittest, Postgres, Redis, GitLab, Docker, Mailhog, Jenkins.

Student Assistant/Web Application Developer

Suny Polytechnic Institute

Utica, New York, USA.

August 2020 to December 2020

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- Web application for Library management.
 - Created REST API endpoints for the web application.
 - Created Front End components for the web application.
 - Clarified doubts.
 - Evaluated the test papers

Tech Stack: Python, Django, Django REST Framework, JavaScript, Angular, HTML, CSS, Postgres.

Research Assistant

Suny Polytechnic Institute

Utica, New York, USA.

February 2019 – March 2019

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- Engineered, trained and tested a feed forward neural network to detect DDOS attacks based on incoming data packets.
 - Performed data cleaning like normalization, removing null values, unnecessary attributes and outliers.

Tech Stack: Python, Pandas, Tensorflow, Matplotlib.

Education

Master of Science: Information Science

SUNY Polytechnic Institute

Utica, New York, USA.

January 2019 to December 2020

Bachelor of Science: Computer Science

GITAM University

Visakhapatnam, Andhra Pradesh, India.

July 2014 to May 2018