PRANITHA POTHUGUNTLA

pranithapothuguntla04@gmail.com | Github

SKILLS

Programming Languages: Java, Springboot, Python, HTML, CSS, JavaScript, Typescript, PHP, NodeJS, SQL, WordPress
Frameworks & Libraries: Pandas, Numpy, Matplotlib, Seaborn, Sci-kit-learn, PyTorch, Spacy, NLP, OpenCV, Hadoop, Bootstrap, JQuery
Cloud & Data Platforms: Google Cloud Platform (BigQuery, Cloud Composer, Cloud Storage, Vertex AI), AWS (S3, EC2, Lambda), PostgreSQL, MySQL
Project Management: Agile, Scrum
DevOps & Tools: GitHub Actions, CI/CD, Postman, Docker, Linux, WHM, Replit, Eclipse, VSCode, Microsoft Copilot
Data & Visualization: Power BI, Tableau, Google Data Studio, Jupyter Notebook, Microsoft Excel
Project & Workflow Management: Agile, Scrum, Jira, Confluence

WORK EXPERIENCE

Cloud AI Engineer | RTNextGenAI **May 2025 - Present**

- Engineered **REST APIs** for AI-driven automation workflows and real-time data exchange between backend components.
- Built chatbot middleware services enabling conversational AI integrations across multiple channels
- Implemented secure authentication and authorization layers using OAuth2.0 and **JWT** for API access control.
- Integrated payment gateways for subscription-based AI service monetization.
- Developed and deployed serverless functions **(AWS Lambda / Cloud Functions)** for real-time data processing and automation.
- Created data ingestion and transformation pipelines to connect chatbot analytics with cloud storage (**BigQuery, DynamoDB).**
- Managed CI/CD pipelines for microservices using GitHub Actions and Dockerized deployments.
- Collaborated on cloud integration workflows connecting external APIs **(OpenAI, Vertex AI)** to enterprise systems.
- Ensured data privacy and compliance through encryption, environment isolation, and secure API gateway configurations.

Software Developer | SiAnth Inc May 2024 – May 2025

Scalable Cloud-Native API Infrastructure with Cursor AI on GCP

- Designed and implemented scalable backend services using **JavaScript, Python, and TypeScript**, focusing on performance, modular architecture, and cloud-ready deployment.
- Implemented **UI/UX** best practices including component reusability, intuitive navigation flows, accessibility standards (WCAG), and mobile-responsive layouts.
- Developed and maintained **RESTful & GraphQL APIs (Node.js / Apollo Server / Flask)** enabling seamless communication between distributed services and client applications.
- Designed optimized **PostgreSQL** schemas, indexing, and data relations to support high-performance querying and reliable data storage.
- Streamlined API queries and mutations to reduce latency and enhance microservice communication efficiency.
- Leveraged **GCP services** including BigQuery (analytics), Cloud Composer/Airflow (workflow orchestration), and Cloud Storage (scalable storage) to build robust backend infrastructure.
- Implemented **JWT-based authentication and role-based access control** to protect endpoints and user data.
- Integrated **Stripe API** to enable secure real-time payment processing within full-stack web solutions.
- Authored API documentation and validated endpoints using **Postman**, ensuring correctness, token security, and error handling.
- Deployed and tested applications on **Replit and GCP**, enabling collaborative development and streamlined CI/CD workflows.

Senior Software Developer | Multiplier AI Solutions July 2020 – Dec 2022

Web Development for Healthcare and Pharma Clients

- Collaborated closely with the **marketing team** to design, troubleshoot, and optimize **100+ web pages**, delivering **cross-platform**, **feature-rich user experiences**.
- Applied **UI/UX** design principles to improve visual consistency, accessibility, and overall usability across healthcare and enterprise web applications.
- Led **end-to-end development** of **web applications** using **React.js**, **Bootstrap**, **JavaScript**, **JSON**, **PHP**, and **WordPress**, resulting in a **30% performance improvement** and a **20% reduction in page load times**.
- Developed **custom WordPress themes and plugins**, enhancing functionality and **user experience** for **healthcare clients**.
- Built **responsive** and **reusable UI components** with **React Hooks**, ensuring **efficient state management** and smooth component lifecycle handling.
- Integrated **RESTful APIs** and led **backend integrations** to enable **real-time data flow** across **multi-cloud environments** for dynamic, scalable web applications.
- Implemented **server-side logic** using **Node.js** to support **React.js** front ends and streamline backend processes.
- Developed **automated workflows** for **email and WhatsApp-based notifications** using **Python**, tailored for **healthcare and pharma clients**, which enhanced **outreach personalization** and **campaign efficiency**.
- Conducted robust **API testing** using **Postman** and implemented **transactional email flows** via the **Mailgun API**, with detailed **QA reports** submitted monthly.
- Spearheaded **automation** and **payment gateway integrations** for two high-impact projects, significantly reducing **manual processes** and enhancing **system efficiency**.
- Enhanced **SEO performance** by **25%** and increased **user engagement** by **40%** through **advanced server-side**

rendering, **optimized routing**, and strategic use of **Google Analytics** and **Google Tag Manager**.
- Collaborated with five developers to implement **new features**, decrease **bug rates** by **40%**, and boost **customer satisfaction** by **25%**.
- Managed **hosting and deployment** for **15+ domains** on **GoDaddy**, handled **DNS modifications**, and transitioned **WordPress sites** to production using **PHPMyAdmin** and **WHM**.

Data Science with Python - Intern | Inmovidu Technologies Aug 2020 – Sept 2020
- Built an end-to-end machine learning pipeline to predict customer churn using Python, pandas, scikit-learn, and SQL.
- Conducted data cleaning, exploratory data analysis (EDA), and feature engineering on historical customer behavior and transaction data.
- Developed and evaluated multiple classification models (Logistic Regression, Random Forest, XGBoost), achieving a model accuracy of **92%**.
- Implemented automated data pipelines using **Python scripts and scheduled tasks**, enabling regular updates and retraining.
- Visualized key churn indicators using **Matplotlib** and **Seaborn**, and created stakeholder-ready dashboards in **Power BI**.
- Delivered actionable insights that enabled the client to prioritize customer retention strategies, potentially reducing churn by **15–20%**.

CERTIFICATIONS

- Certified in Python for Data Science - Cognitive class
- Certified in Frontend fundamentals - Udemy, Pirple
- Certified in Python for Data Science - NPTEL
- Certified What is Data Science? - Coursera
- Artificial Intelligence Workshop - ETHICAL EDU FABRICA PVT. LTD.
- Certified Career-Edge Knockdown the Lockdown - TCS iON
- LAUNCHPAD ‘20 (E-SUMMIT) - BITS Pilani

PROJECTS

Data Visualization of Weather, Agriculture, and Crop Yields
- Conducted multi-source data analysis using datasets from ICRISAT, Indian Weather Repository, and crop yield statistics, focusing on correlations between weather variability and agricultural output.
- Performed data cleaning, transformation, and integration by aligning schemas and establishing common keys across datasets, ensuring data consistency and accuracy.
- Designed interactive dashboards in Google Data Studio, Power BI, and D3.js (VizHub) to visualize rainfall patterns, pesticide/fertilizer usage, and crop yield trends over multiple years.
- Delivered visual reports that identified optimal sowing windows, highlighting the importance of balanced pesticide/fertilizer usage for yield maximization.

Movie Recommendation System Using NLP Techniques
- Built a personalized movie recommendation system by analyzing large datasets from TMDB and IMDB, incorporating user reviews, metadata, and ratings.
- Utilized Python, Pandas, NumPy, and NLP libraries (TextBlob, NLTK, Beautiful Soup) to preprocess raw datasets, clean HTML tags, normalize text, and perform sentiment analysis.
- Developed content-based filtering models leveraging TF-IDF vectorization and cosine similarity for matching user preferences with movie metadata.
- Integrated sentiment scores into the recommendation pipeline, improving the relevance of suggested movies by considering audience feedback.
- Conducted exploratory data analysis (EDA) on genres, popularity scores, and review sentiments to enhance model features, resulting in higher accuracy and better user satisfaction metrics.

Enhancing Water Body Detection on Satellite Images
- Designed a machine learning and image processing pipeline to accurately detect and segment water bodies from high-resolution satellite imagery.
- Applied image preprocessing techniques including Gaussian Blur, median smoothing, histogram equalization, and contrast stretching to improve water body visibility.
- Utilized HSV color space segmentation, Canny edge detection, and custom thresholding to distinguish water regions from land and vegetation.
- Integrated K-Means clustering for unsupervised pixel classification, tuning cluster sizes to optimize segmentation performance for varying water types.
- Trained and evaluated models using precision, recall, and F1-score, achieving precision up to 99.2% and recall up to 98.3%, ensuring highly accurate water mapping results.
- Automated processing workflows to handle large geospatial datasets, reducing manual mapping time by over 40%.
- Created visual comparison maps for before/after detection results, supporting environmental monitoring, flood risk assessment, and agricultural irrigation planning.

EDUCATION

- University of North Texas — Texas, USA
  Master's in Computer and Information Sciences
- J.B. Institute of Engineering and Technology — Hyderabad, India
  Bachelor of Technology - Information Technology