PRANITHA POTHUGUNTLA

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Software Developer and Data Analyst with hands-on experience in designing, developing, and deploying scalable applications, APIs, and cloud-native solutions. Skilled in Java, Python, JavaScript, SQL, and full-stack development, with exposure to Azure, AWS, and GCP. Strong background in API development, DevOps pipelines (CI/CD), test automation, and cloud migration. Adept at working in Agile Scrum teams, integrating secure, high-performance applications, and continuously improving product quality. Looking to contribute technical expertise and problem-solving skills to innovative projects.

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

Software Developer | RTNextGenAI   May 2024 – Present

Scalable Cloud-Native API Infrastructure with Cursor AI on GCP

- Designed, developed, and deployed API services on GCP using RESTful and GraphQL standards, ensuring secure data exchange, modular design, and high system availability.
- Built backend services with Python/Flask, leveraging PostgreSQL for secure storage, optimized indexing, bulk inserts, and high query performance.
- Developed and integrated APIs with GraphQL (Apollo Server) to enable efficient communication between backend and frontend systems, streamlining queries, mutations, and bulk data processing to reduce latency.
- Built full-stack web applications with TypeScript (frontend) and Flask (backend), developing responsive UIs and RESTful APIs for smooth client-server communication.
- Implemented JWT-based authentication to secure endpoints, protecting sensitive operations and customer data.
- Automated data ingestion pipelines using Python, cURL, and HTTP requests, performing data validation, transformation, and cleaning before database loading to ensure consistency and integrity.
- Applied data analysis techniques to optimize API performance, query efficiency, and bulk data processing pipelines.
- Leveraged Pandas, NumPy, and SQL for data modeling, aggregation, and reporting to support analytics-driven decisions within applications.
- Integrated Stripe API for secure, real-time payment processing, managing webhook events for transaction updates.
- Applied test automation frameworks, validated APIs with Postman and Swagger/OpenAPI, and optimized calls with pagination, caching, and error handling, reducing server load and response times.
- Implemented unit and integration testing (Junit, Maven, Selenium) to ensure system reliability and support continuous delivery.
- Implemented CI/CD workflows with GitHub Actions, automating build, testing, and deployment to improve release frequency and reduce defects.
- Migrated workloads into Dockerized environments and deployed apps in Replit, enabling scalable deployments, collaborative debugging, and production-like testing.
- Designed for cloud scalability, uptime, and monitoring, ensuring rapid triage and resolution of production issues with a production-first mindset.
- Leveraged Cursor AI for debugging, code reviews, and collaborative API development, improving team productivity and code quality.
- Participated in Agile Scrum ceremonies (standups, sprint planning, retrospectives), actively contributing to swarming and sprint velocity improvements.
- Conducted peer reviews, enforced secure coding practices, and promoted continuous learning to raise overall product quality.
- Collaborated cross-functionally to support cloud migration initiatives and data-driven product enhancements, improving deployment efficiency and aligning with enterprise modernization goals.

Senior Software Developer | Multiplier AI Solutions   July 2021 – 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.
- Led end-to-end development of web applications using HTML, CSS, 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.

Software Developer Executive
- Modern JavaScript (ES6+) was used to develop clean, modular, and maintainable codebases, significantly reducing technical debt and enhancing code readability.
- Developed and deployed dynamic, real-time dashboards using React.js, seamlessly integrating with backend systems to deliver responsive data visualizations.
- Engineered custom chatbots using TypeScript, tailored to client-specific needs, driving lead generation and enhancing customer support efficiency.
- Managed Vtiger CRM user accounts, streamlining administrative workflows and reducing operational overhead by 25%, while strengthening data security protocols.
- Enhanced website performance by optimizing assets and scripts, resulting in a 40% decrease in page load times and a 20% increase in average session duration.

Inmovidu Technologies   Aug 2020 – Sept 2020
- Designed and developed a full-stack web application for managing customer profiles, transactions, and retention activities using TypeScript (frontend) and Flask/Python (backend).
- Built RESTful API endpoints to handle CRUD operations for customer data, transaction histories, and account status updates.
- Integrated PostgreSQL for secure data storage, optimizing queries and indexing for faster API response times.
- Implemented authentication and authorization using JWT to protect sensitive endpoints and ensure role-based access control.
- Developed API logic to fetch and process customer activity data from third-party services using HTTP requests and cURL, enabling up-to-date profile enrichment.
- Created a responsive, user-friendly frontend with interactive forms, tables, and filters to allow real-time customer data search and updates.
- Connected APIs to a Power BI dashboard for dynamic visualization of customer engagement metrics, enabling data-driven decision-making.
- Deployed the application on a cloud-based environment, ensuring scalability, security, and continuous availability.
- Delivered a solution that improved operational efficiency by streamlining customer account management and reducing manual update time by 40%.

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.
- Applied statistical correlation analysis and time-series modeling to uncover the relationship between temperature, rainfall, and agricultural productivity.
- Enabled comparative crop analysis across regions, supporting agricultural policymakers with actionable insights for seasonal crop planning and resource allocation.
- 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.
- Implemented collaborative filtering techniques (user-user and item-item) and hybrid models to enhance personalization and recommendation diversity.
- 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

- JBIET   Hyderabad, India
    Bachelor of Technology - Information Technology