



Yeshwanth Reddy Peddamallu

AI/ML, Software Engineer

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Summary

- Accomplished Software Engineer and AI Data Scientist with over 3 years of professional experience in designing, developing, and deploying innovative software solutions. Equally proficient in Java, Spring Boot, and Android app development as well as Python, SQL, and PyTorch.
- Skilled in integrating advanced AI technologies and building robust applications across various platforms, demonstrating a strong command of both web and mobile development environments.
- Strong analytical abilities with excellent problem-solving and decision-making skills, capable of balancing technical and business considerations.
- Strong background in software development, system design, and architecture, with comprehensive experience across various programming languages and frameworks including Java, Spring Boot, and Android apps alongside Python, SQL, PyTorch, and Huggingface.
- Proficient in software architecture principles, design patterns, and best practices, with a balanced focus on Java-based environments, mobile application development for Android, and Python-driven software solutions
- Experienced with major cloud computing platforms like AWS, Azure, and Google Cloud Platform. Holds an AWS Certified Solutions Architect certification.
- Deep knowledge of microservices architecture and expertise in containerization technologies such as Docker and Kubernetes, enhancing efficient deployment and management of applications, including Java and Android-based systems.
- Skilled in both SQL and NoSQL database design and management, ensuring robust data storage solutions.
- Extensive experience in Agile environments; proficient in Scrum, Kanban, and other Agile frameworks. Knowledgeable in DevOps methodologies, tools, and practices, enhancing workflow and productivity.
- Experienced in designing Jenkins jobs for CI/CD pipelines, and proficient in version control systems including CVS, SVN, and GIT.

Skills

- **Programming/Scripting:** Python, Java, R, SQL, PHP, Spring Boot
- **Java/Python Libraries:** scikit-learn, TensorFlow, PyTorch, Maven, Gradle, Spring, Hibernate, J2EE
- **Data Visualization:** Tableau, Power-BI, Matplotlib, Seaborn, Plotly, Excel
- **ML Techniques:** Generative AI, Regression, Classification, Clustering, Topic Modelling,
- **Tools:** Git, Jenkins, Docker, AWS (S3, EC2, Redshift, Lambda, CodeCommit), Google Cloud Platform, Azure.
- **Development and Methodologies:** Agile, Scrum, Waterfall, SDLC, Git, SVN.
- **Operating Systems:** Linux, Unix, Windows (11, 10, 8, 7, Server 2008/2003), Mac OS

Work Experience

ML Engineer (*Alexa Social Bot*) ← [click here](#)

Jersey City, NJ 10/2022 - 09/2023

- Spearheaded the research, design, development, deployment, and maintenance of a high-performance media retrieval engine for the Alexa Social Bot. Achieved a remarkable [search time of under 0.015 seconds](#) within a database of 4 million entries, resulting in a [30% improvement in user ratings](#).
- Integrated multi-modal capabilities into our social bot using Vision-Transformers, enhancing the visual appeal of the chatbot interface. This innovation led to an [80% improvement](#) in user interaction experience.
- Curated a comprehensive [4-million](#) multimedia dataset comprised of high-quality images and videos. Prioritized safety and privacy by meticulously removing sensitive, negative, violent, and personal data, ensuring compliance and data integrity.
- Collaborated closely with team members to fine-tune large language models (LLMs) and sustain our solution architecture on AWS, enhancing system efficiency and reliability.
- Worked on AWS utilized various services AWS Lambda, Load Balancer, EC2, ECS, ECR, S3, Cloud Formation, Code Commit, CodePipeline, CodeBuild, Cloud Watch.
- Continuously learning and implementing new skills and understanding the latest technologies with the ability to work in a fast-paced, dynamic environment, and adapt to changing priorities and requirements.

Data Scientist - Analysis (Genpact)

Hyderabad, India 01/2020 - 08/2022

- Developed a hierarchical classifier to sort customer feedback into specific categories and sub-categories for Estée Lauder, a company with a diverse range of products across multiple brands. This system accurately directed feedback to the appropriate department, streamlining the feedback loop and [reducing response times by 50%](#).
- Designed and implemented custom AI/ML solutions tailored to the needs of international clients, significantly enhancing their business operations by automating text-based classification tasks.
- Engineered a customer service chat-assistant for a leading U.S. entertainment and theme park provider. This solution improved issue resolution efficiency, resulting in a [20% increase](#) in resolved cases within the following quarter.
- Created an efficient issue classification algorithm using semi-supervised learning methods for unlabeled data. Collaborated closely with the client on data labeling and tailored the solution design to meet specific business requirements.
- Developed a document search engine for an insurance client with a vast repository of physical and digital documents.
- Integrated OCR solutions for scanned images, addressing challenges such as tilted, stamped, and physically signed documents.
- Proficient in Python, Flask API, Selenium, GitHub, Jenkins, Docker, and Docker Swarm for large-scale code deployment.
- Utilized cloud services from AWS, GCP, and Azure, including Google Dialogue Flow, Google Document AI, Google Speech to Text, and more.

Research Assistant - AI (NIIT University)

Rajasthan, India 06/2017 - 08/2018

- Designed and developed a comprehensive Android application utilizing Java for backend services and SQL for database management. Implemented a custom API using PHP to facilitate food ordering across all university restaurants, enhancing the dining experience by offering a unified, efficient platform for students and faculty.
- Design of a interactive learning cross-platform AI assistant for desktop operating systems, gaining extensive experience in manipulating core OS features like mouse and keyboard control.
- Employing 2D computer vision techniques to enable the AI to analyze images and detect objects, such as application icons and menus, allowing the AI to perform user-like task-specific actions, enhancing operational efficiency and user interaction.

Thesis Project

Reducing the Randomness in Chatbot Evaluation with Test-retest Match

Stevens, NJ 12/2023 - 05/2024

- Designed three innovative metrics to measure chatbot evaluation certainty consistency, variability, and stability enhancing the reliability of AI assessments.
- Proposed and implemented a test-retest match method to quantify stability in chatbot evaluations, significantly improving the precision of AI performance testing.
- Implemented techniques to decrease randomness in chatbot evaluations, achieving a 8.75% improvement in the stability of evaluation outputs, which supports more dependable AI deployment decisions.

Achievements & Certifications

- [25K+ downloads for my Android Game on Google Play store \[Released in 2020\]](#)
- [Developed a Java-based Android app that streamlined food ordering from any university restaurant.](#)
- [AWS Solution Architech - Associate \[Valid 04/2024 - 04/2027\]](#)
- [Alexa Prize Social Bot Grand Challenge \[08/2023\]](#)
- [1st prize in National Level IOT competition](#)

Research Papers

- [From Hybrid Dialogers to Neural Responder](#)
- [Improving Air Quality Prediction: A Study on Data-Driven Techniques and Advanced Sensing Technologies.](#)
- [Object Boundary Detection using Neural Networks in Deep Learning - IJEAT](#)
- [An Approach for Optimizing Algorithms Which Finds k1- Most Demanding Products - ICACEC](#)

Education

Masters with Thesis - Computer Science *Stevens Institute of Technology*

Jersey City, NJ

Bachelors - Computer Science *NIIT University*

Neemrana, India