

PRATISHTHA SONI

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SUMMARY

- **Dynamic and result-driven developer** with 3 years of experience as Software Developer and 2 years of Masters in Computer Science.
- Published researcher in Machine Learning and Artificial Intelligence, with papers presented at prestigious conferences such as AIMHC-IEEE and EC BIOS-IEEE in 2024, focusing on innovative applications in the Healthcare and social services domain.
- **Contributed to agricultural technology advancements**, with publication on Agricultural Crop Yield Prediction Using Artificial Intelligence and Satellite Imagery in Eurasian Journal of Analytical Chemistry 2019.
- Recognized for excellence, awarded Spot Award for the Automation of Data Extraction in L&T Technology Services Limited in 2021
- Active Community leader, currently serving as an Organizer at Google Developer Group (GDG) Fullerton Chapter.

SKILLS

Languages : Python, C++, SQL

Tools & IDE's : Microsoft SQL Server, MongoDB, JIRA, Github, Git

Software Development Methodologies : Waterfall, Agile (Scrum)

Cloud Services : Amazon Web Services (AWS), Azure

Web Technology : Flask, Kafka, Api Development, Docker, Postman

Operating Systems : Linux, Windows

PROFESSIONAL EXPERIENCE

Research Associate

March 2023 - May 2024

California State University Fullerton, CA

- Led a collaborative project focusing on the development of ML based image recognition models, specifically designed for the healthcare domain with a strong emphasis on social services and also presented posters in USC.
- Predicted food images by implementing Computer Vision, Machine Learning and Deep Learning models after collecting and storing images using Azure Blob Storage and OpenCV within TensorFlow, Keras, and PyTorch frameworks.
- Explored diffusion models and multimodal frameworks, leveraging transformers for LLMs, text-to-text and image generation, to enhance image recognition capabilities.

Teaching Associate

January 2023 - May 2024

California State University Fullerton, CA

- Instructed undergraduate students in Python and advanced C++, communicating concepts of Data Structures.

Senior Python Developer

February 2022 - Aug 2022

ValueLabs, Hyderabad, India

- Enhanced scalability and availability by developing and testing REST APIs for client website integration, optimizing cloud operations, resulting in 50% cost reduction and improved process debug time.
- Leveraged cloud-native services such as AWS Lambda, Amazon EC2 to build resilient applications, leading to a 30% enhancement.
- Improved performance and ensured the smooth transmission of live data across diverse Kafka topics by troubleshooting and deploying producer and consumer scripts, which led to managing over 1000 requests and resolving issues.

Software Engineer

June 2019 - February 2022

L&T Technology Services, Vadodara, India

- Identified patterns from unstructured documents and extracted features according to clients requirements by leveraging Natural Language Processing (NLP) based platforms, which led to 70% accuracy and improved the quality and reliability of the data, saving 25 hours of manual work per week.
- Implemented ETL/ELT processes in Azure Data Factory to automate and schedule data workflows, ensuring continuous data integration and availability for analytics teams, resulting in enhanced data accessibility and reliability.
- Automated web scraping of selected features applied statistical analysis with 80% accuracy from websites by writing backend scripts using Selenium.
- Executed tabular data extraction and export to a predefined report format by executing data integration scripts using SSIS to read .json and .xlsx files, enhancing scalability and reducing manual data entry processes by 40%.
- Revealed meaningful patterns in the dataset by utilizing Power BI and SQL queries for conducting data analysis using SQL Server, leading to enhanced insights for decision-making.
- Incorporated agile ceremonies (SDLC) to address clients requirements, designing, coding, testing ontologies and knowledge graphs with Python scripts for viewing relationships among 40+ excel sheets.

ACADEMIC PROJECTS

NYC Automated Traffic Volume Counts (*pandas, hadoop, java, spark, pyspark, SQL, HDFS*)

- Utilized big data tools to analyze diverse data trends through Spark queries on GCP within the Hadoop framework, leading to improved business intelligence and scalable data insights.

Crop Yield Prediction using Artificial Intelligence and Satellite Imagery (*opencv, scikit-image, tensorflow, pytorch*)

- Implemented a rule-based system to forecast crop yield prediction from a pool of (Geographic Information System) GIS data by applying ANN algorithm and CNN algorithm with 89% accuracy.

EDUCATION

California State University Fullerton, USA - Master of Science, Computer Science

August 2022 - May 2024

SRM Institute of Science and Technology, India - Bachelor of Technology, Computer Science and Engineering

July 2015 - May 2019