

Tarun Chittajallu

716-335-1244 | tarun.chittajallu@gmail.com | <https://www.linkedin.com/in/tarunchittajallu/>

SUMMARY

Accomplished Software Engineer with deep expertise in full stack development. Proven experience in writing intermediate to advanced SQL queries, stored procedures and crafting solutions for intricate challenges using Python and C#. Specialized in Application and Software development in cloud environment including Azure and AWS with around 4 years of experience. With a Masters degree in Data Science, I excel at distilling complex data insights into understandable narratives, fostering collaboration across teams, and adapting to evolving project requirements. With a keen eye for detail and a passion for innovation, committed in delivering high-quality solutions to meet and exceed organizational objectives. My ability to create a welcoming and collaborative work environment enhances the overall project experience. I'm passionate about delivering high-quality results and eager to apply my diverse skill set and people-friendly approach to make a meaningful impact in any role.

EDUCATION

Masters in Computers and Information Sciences (Major : Data Science)

University at Buffalo, The State University of New York (GPA - 3.89/4) Aug 2022 - Jan 2024

Coursework : Advanced Mathematics, Probability and Statistics, Python, R Programming, Statistical Data Mining, Machine Learning, Big Data, Cybersecurity, Data Analytics and Visualization, Bayesian Networks

Bachelors in Computer Science and Engineering Gandhi Institute Of Technology And Management, Visakhapatnam , India (GPA - 8.5/10) Aug 2015 - May 2019

Coursework : Object Oriented Programming, Computer Architecture, Distributed Systems, Data Structures And Algorithms, Database Management Systems, Operating Systems, Compiler Design , Cloud Computing, Web Technologies

SKILLS & TOOLS

Programming Languages: Python, C#, Java, R

Frameworks : ASP.NET core , ASP.NET Framework, Django , Flask

Python Libraries : Numpy, Pandas, Matplotlib, Scipy, PySpark , Tensorflow , PyTorch , OpenAI , JAX , HuggingfaceTransformers

Web Technologies: HTML5, CSS3, JavaScript, Angular.JS, Bootstrap, AJAX, JQuery

Web Services and Data Formats : RESTful APIs, SOAP, WSDL, JSON, XML, XSLT

Database Technologies :SQL, PostgreSQL, Oracle , SSIS

Messaging Queue System : JMS, Kafka, RabbitMQ

Devops and Built Tools: GIT/GitHub, Docker, Azure DevOps, ELK, CI/CD, Kubernetes, Jenkins, Maven, Terraform, AWS(EC2 and ECS), CloudWatch, Log4J

Tools : Tableau, PowerBI , Eclipse, PyCharm, PyDev, Spyder , VS Code , Visual Studio

Operating System : Windows(All Variants) , LINUX/UNIX

Methodologies : Agile , Waterfall

WORK EXPERIENCE

Software Developer , Excellence Tech , San Jose , California : Feb 2024 – Present

(Tech Stack - Python, Django, Numpy, Pandas, Matplotlib, urllib2, XML, AWS, PyTest, PySpark, HTML5, CSS3, JavaScript, MVC, AJAX, JQuery, PL/SQL, Agile and Windows.)

- Involved in various phases of **Software Development Life Cycle (SDLC)** of the application like requirement gathering, Design, Analysis and Code development.
- Developing **Python** Framework using **Django** to perform scan software unit monitoring.
- Used **Django** framework to develop the application and used **Python** modules such as requests and **urllib2** for web crawling.
- Wrote **python** scripts to parse **XML** documents and loaded the data in database.
- Wrote **Python** normalizations scripts to find duplicate data in different environments.
- Developed Web based Dynamic Form Builder using **HTML5**, **CSS3**, and **JavaScript Object-to-XML**.

- Involved in writing scripts using python modules and its libraries like **NumPy, Scipy, Matplotlib, Pandas** to develop programs that improve processing of access requests.
- Involved in automating data movements using **python** scripts, involved in splitting, validating, and processing of files.
- Used **Python** based **GUI** segments for the front-end usefulness, for example, choice criteria, created test outfit to empower exhaustive testing using **Python**.
- Generated **Python Django** forms to record data of online users and used **PyTest** for writing test cases.
- Written **python** module to view and connect to **AWS S3** instance.
- Constructed product-usage data aggregations using **Py-Spark, Spark SQL** and maintained in AWS S3 location for reporting, data science dash boarding and ad-hoc analyses.
- Worked on developing Web Services with Python programming language and processed large datasets with Spark using **PySpark**.
- Parsed the unstructured data into semi-structured format by writing complex algorithms in **Pyspark**.
- Worked with JSON based REST Web services and Amazon Web services (AWS).
- Used **AJAX** to modify small portions of the web pages by sending a request to the server avoiding the need of reloading the entire web page.
- Designed and developed Web services using **XML and JQuery**.
- Created **PL/SQL** stored procedures, functions, and packages for moving the data from staging area to data mart.
- Involved in **Agile** Methodologies, Scrum stories and sprints experience in a **Python** based environment.
- Involved in organizing meetings to know the needs of clients for the Enterprise solution Implementation.

Software Engineer , Accenture , Hyderabad , India : June 2019 – July 2022

(Tech Stack - ASP.NET Core and MVC , C# , MSSQL 2016 , SSIS , HTML , JavaScript , Typescript , AJAX, Azure Devops, RabbitMQ, Snowflake , Tableau)

- Engaged in development of a product catering to utilization management and claims processing for a United States based healthcare to drive product innovation and evolution.
- Led the design and scheduling of Windows-based applications utilizing .NET Core, enabling simultaneous operations and facilitating the seamless exchange of data with MPATH (Montana Program for Automating and Transforming Healthcare) via RabbitMQ for both inbound and outbound data flows.
- Developed numerous SSIS Jobs for various components such as member, provider, Service Auth, and claims, facilitating the migration of substantial data volumes (approximately 5-10 million records per component) from flat files to the product database. This initiative streamlined product functionality across diverse databases, resulting in a notable 15% reduction in conversion time.
- Created Advanced SQL Stored Procedures to conduct business validations, eliminate redundancies, and efficiently transfer data from staging database to the product database.
- Engineered SQL scripts to automate the creation of new cost plans and care plans for all members annually, aligning with client specifications and eliminating manual intervention. This automation initiative contributed to a significant 4% cost reduction for the client.
- Executed UI/UX design enhancements across all claims-related components, elevating product functionality with additional features that translated into increased profits for the client.
- Defined Unit Test Automations for over 20 product components by boosting testing efficiency and ensuring robust performance across various facets of product.
- Developed Web APIs (both REST and SOAP) utilizing ASP.NET and ADO.NET, enabling seamless loading and retrieval of data from the product database.
- Collaborated extensively across multiple teams to ensure the seamless functionality of the product.
- Implemented error handling and recovery procedures to ensure job reliability.
- Ensured compliance with security policies and standards for file transfers.
- Managed Docker container lifecycle: creation, start, stop, and removal using Docker CLI/API.
- Played a key role in optimizing SQL queries and tuning database performance, improving system efficiency.
- Spearheaded frontend design and development to multiple components that helped the product functionality across different kinds of users.
- Carried Out training sessions for junior staff on the product design and functionality.
- Had been a part of Data Migration team from on Premise MS SQL to Snowflake for a faster data retrieval to generate reports.
- Generated reports using Tableau to assess different customer bases that helped the product team in making key business decisions on the product implementation.

Web Application Developer Intern, Codium Corp systems , Hyderabad , India : Jan 2018 – April 2019
(Tech Stack - Python, Django, HTML, CSS, JavaScript, Bootstrap, Angular.JS, Panda, JQuery, JSON, MySQL, and Windows)

- Involved in the Design, development, test, deploy and maintenance of the website.
- Developed **Python** batch processors to consume and produce various feeds.
- Used **Django** framework for application development.
- Developed internal auxiliary web apps using **Python Flask framework** with **CSS / HTML** framework.
- Used **Django** evolution and manual SQL modifications were able to modify **Django models** while retaining all data, while site was in production mode.
- Used **HTML5, CSS3, JQuery, JSON** and **JavaScript** for front end applications.
- Managed large datasets using **Panda** data frames and **My-SQL**.
- Used **Python** based GUI components for the front-end functionality such as selection criteria.
- Carried out various mathematical operations for calculation purpose using python libraries.
- Performed troubleshooting, fixed, and deployed many Python bug fixes of the two main applications that were a main source of data for both customers and internal customer service team.
- Implement code in python to retrieve and manipulate data

ACADEMIC PROJECTS

Sales Data Analysis and Visualization : MySQL, BI, Tableau.

- The sales data contains over 200k transactions, and did data cleaning including removing duplicates, handling null values, and unified currency formats resulting in a slight 3% reduction in data.
- Created a Tableau dashboard showcasing comprehensive insights spanning from 2019 to 2022, featuring total revenue of 985M, sales quantity of 2M, and profits totaling 24.7M.
- Identified and ranked top 5 loyal customers and products, analyzing contribution to revenue and profit.
- Segmented markets and monitored revenue and profit trend margin of the company over a 4-year period.

Sentiment Analysis on Chat Gpt Reviews: Python, ML, NLP.

- Built a sentiment analysis model to track public opinion on ChatGPT. The collected dataset contains 30k reviews and performed NLP tasks such as tokenization, lemmatization and stop word removal.
- Utilized word embedding techniques such as BOW, TF-IDF, and Word2Vec to mathematically represent words and trained with two models, Logistic Regression and Random Forest, to predict the sentiment of the data.
- The Random Forest model using Word2Vec yielded maximum accuracy of 85%.

Flight Price Prediction : ML with Python.

- Implemented a machine learning model (Linear Regression and Ridge Regression) from scratch in Python to predict flight prices using 50 days of data from March 2022, comprising over 300k data points and 11 features.
- Executed data cleaning and model experiments, achieving 90% accuracy with custom-built linear and ridge models, and elevated performance to 97.3% accuracy utilizing the XGB regressor.

Simulation of Friction Stir Welding : Artificial Neural Network with Python

- An artificial neural network (ANN) model was developed for the analysis and simulation of the correlation between the friction stir welding (FSW) Parameters of Aluminum (Al) plates and mechanical properties.
- The weld speed and tool rotation speed were taken as input parameters and ANN model was developed with tensile strength, yield strength, elongation, hardness of weld metal as outputs.

Image Re-Identification : Convolutional Neural Network with Python

- A Convolutional neural network (CNN) model was developed and trained on 50,000 images to further identify new images.