PRUDHVI ARUN CHEKKA

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"Experienced Senior Python Developer with 5 years of expertise in building scalable solutions using Python, Java, JavaScript, and SQL. Proficient in database management (Oracle, MySQL, SQL Server), Data Science and frameworks like Flask, Django, React. Skilled in optimizing data processing pipelines, implementing CI/CD pipelines, and deploying cloud solutions with AWS. Strong problem-solving abilities and a commitment to continuous learning and innovation.".

SKILLS

Programming Languages: Python, Java, JavaScript, C, C++, HTML, CSS, SQL.
Databases: Oracle, MySQL, Microsoft SQL Server, PostgreSQL, SQLite, MongoDB.
Frameworks and Tools: Flask, Django, React, Angular, SQL Server, Jupyter Notebook, SSIS, Informatica, Jenkins.
Cloud: AWS SDK, AWS CDK, Microsoft Azure, GitHub, CI/CD, Docker.
Visualization: Power BI, Tableau.

WORK EXPERIENCE

General Electric, *Bangalore (India)*   *Jul 2021 – Dec 2022*
Senior Python Developer

- Build *REST API* functions using the *Flask* framework, enabling GE to execute over 500 ETL tasks daily in AWS, resulting in streamlined business operations across all lines.
- Leveraged *React* for frontend development, resulting in a seamless user experience and optimal functionality by enhancing and fixing bugs.
- Utilized *React Hooks* and *Webpack* to develop efficient and scalable reusable web components ensuring efficient code maintainability.
- Enhanced *JSON parser* enabling efficient data ingestion from diverse sources including Splunk, Elasticsearch, Azure, Intune, MobileIron, Redshift, Amazon S3, LDAP, MySQL, Oracle, PostgreSQL, and Box.
- Integrated and troubleshot an *ETL* integrity checker tool, leveraging *regex patterns*. Implemented custom notifications using *AWS SNS* and *AWS API Gateway* to send reports and updates on thresholds.
- Worked with comprehensive *AWS pipeline* management system using *Python*, *Boto3*, and Docker, enabling deployment and orchestration of *AWS ECS*, *EC2, Fargate, Event bridge*, and *Lambdas*.
- Spearheaded the redeployment feature, facilitation seamless updates across 500 ETL's, Lambdas, Lambda layers, and Fargates stored in *ECR* in a single operation.
- Developed AWS CloudFormation templates and *AWS CDK* scripts using *TypeScript* to provision infrastructure resources including S3 buckets, API Gateway endpoints, DynamoDB tables, and EC2 instances.
- Employed *multi-threading* and *lazy loading* techniques to optimize code, resulting in *40% reduction* in execution time for data ingestion.
- implemented a *CI/CD pipeline* using GitHub triggers and *Jenkins*, enabling automatic deployment upon code push to the Git repository, streamlining the development and deployment process.
- Assumed end to end ownership and comprehensive responsibility for projects, proficiently steering them from the proof-of-concept stage to successful deployment in the production environment.
- Thrived in an agile, rapid paced environment with distributed teams of both technical and non-technical individuals, fostering successful collaboration and communication.

Tata Consultancy Services (Client: New York Life), *Hyderabad (India)*   *Jun 2018 – Jul 2021*
Software Engineer

- Designed and developed more than 50 Control Reports to test more than *450K* policies and *80M* transactions during a data migration of *OAS/VAS to rPay* using *SSIS and Python Automation*.
- Automated data queries and comparisons across *Oracle* and *SQL Server* databases using *linked server* functionality.
- Developed universal packages using SSIS to load data into various testing and integration environments.
- Ensured policy adherence to regulatory requirements by testing and validating policy rules with the help of *Suitability Workbench*, contributing to the enhancement of compliance processes at New York Life Insurance.
- Actively contributed to the development and execution of automation test cases with *Orchestrator* tool. These automated test cases streamlined the testing workflow, improved accuracy, and accelerated the policy validation process.

PROJECTS

House Price Predictions | Advanced Regression Techniques | Data Science
- Led Exploratory Data Analysis (EDA) to unveil patterns and outliers on *79* feature variables.
- Performed data preprocessing to handle missing values, categorical variables by employing data imputation, normalization, and one-hot encoding, ensuring an optimized dataset for advanced regression analysis using NumPy and Pandas.
- Executed *Model Development* by utilizing techniques such as *Grid Search* for Hyper Parameter Optimization and *Kfold Cross-Validation*.
- Enhanced predictive data models using *stacked Regression* and *ensemble methods,* for effectively combining the strengths of multiple models to achieve superior predictive accuracy and stability which improved the *RMSE* score from *0.11* to *0.074*.

ScalaTion Project | Computational Data Science
- Actively contributed to the Scalation project as a Research Assistant, working in the development of *Regression Trees* to facilitate optimal data splitting at greater depths within a comprehensive modeling using *Scala*.
- Implemented *feature bagging* approach to enhance the versatility and performance of *Random Forests*, mitigating overfitting.
- Engineered a *gradient-boosting* algorithm, showcasing adeptness in implementing and optimizing machine learning algorithms.
- Conducted comparative assessments against *scikit-learn's* libraries and SclaTion, achieving a correlation of 98%.

Text to SQL generator | Optimizing LLM for querying database.
- Created a *Text to SQL chatbot* with Langchain to access OpenAI API's, LLM and streamlit, applying Prompt Engineering, Chain of Thought, and Zero-shot Learning techniques.

Online Bookstore | E-commerce website
- Built a *full-stack e-commerce website* using Python with the Django Framework for the backend, HTML, CSS for the frontend, and SQLite for the database.

Distributed String Array Management with Concurrency Control Using Java RMI
- Implemented a distributed system to manage an array of strings as a remote object, utilizing Java RMI for remote method invocation and ensuring concurrency control with read and write locks.
- Designed and implemented synchronization to handle simultaneous client requests, preventing race conditions.
- Developed client operations for fetching, printing, and writing elements, maintaining synchronization through locks.

Web application and Database design | Airport Management System
- Strategically engineered the database by comparing *UML Class Diagrams, 3NF/BCNF* Normalization techniques.
- Developed an interactive web-based application using *React* and Node.js along with *pagination* for efficient data display.

ACHIEVEMENTS
- **LeetCode Practitioner**: Maintained a consistent streak of 140 days on LeetCode, earning 6 badges for problem-solving and coding challenges.
- **On the Spot Award:** Recognized for exceptional performance with the "On the Spot Award" at the NYL Town Hall.
- **Best Team of the Month:** Contributed to our team being recognized as the "Best Team of the Month" at NYL.

EDUCATION

University of Georgia, Athens GA, USA   *Jan 2023 – May 2024*
Master's in Computer Science   *GPA: 4.0*
Courses: Advanced Distributed System, Advanced Information Systems, Data Science, Algorithms, Software Engineering, DBMS, Computer Networks.