Pujitha Kallu

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Education

Santa Clara University – *Master's in Computer Science*   GPA: 3.8/4   Sep 2023 – Jun 2025
MGIT – *Bachelor's in Electronics and Communication*   Jul 2014 – Mar 2018

Technical Skills

- **Languages & Web Technologies:** Python, Dart, C, C++, Java, HTML5,CSS, JavaScript
- **Databases:** SQL,MYSQL, DynamoDB, SQLite, MongoDB, Elasticsearch, Oracle
- **Frameworks:** Flutter, Firebase, S3, Java Spring Boot, PyTorch, Spring, Angular, Apache Kafka, React.js, Nods.js, Django, Bootstrap 4.0
- **Cloud & Virtualization:** Amazon Web Services, Microsoft Azure, Docker, Kubernetes, DevOps, CI/CD, CloudFormation, Terraform, Prometheus
- **Other Methodologies & Tools:** Agile**,** SDLC, Shell script, REST API, Git, JIRA, Microsoft Azure, Bitbucket, REST APIs, Looker, Tableau, Power BI, Confluence, Linux, Postman,UAT
- **Courses:** Advanced Operating Systems (Teaching Assistant), Algorithms and Data Structures, Computer Networks, Computer Architecture, Machine Learning, Distributed Systems, Database Systems, Operating Systems, Web Technology, Object-Oriented Programming, Mobile Application Development

Work Experience

Frugal, Santa Clara University, Research Analyst   Santa Clara, CA   Jun 2024 – Present
- Developed an Integrated Bilingual Multi-Game Platform using Flutter, Firebase, and Dart, enabling access to multiple games with a secure 3-digit login.
- Leveraged Firebase for authentication, hosting, and personalized game access, ensuring a kid-friendly experience. Designed interactive challenges with real-time progress tracking and multimedia support, achieving a 95%+ completion rate in beta testing. Live Demo.

Santa Clara University , Teaching Assistant   Santa Clara, CA   Apr 2024 – Jun 2024
- Designed the course work for Advanced Operating Systems and assisted students. Guided students through implementation of Multithreaded programming projects, Memory management systems and Process scheduling algorithms.
- Created supplementary learning materials and coding examples, Provided one-on-one assistance. Graded programming assignments and provided detailed feedback.

TechMahindra, Software Engineer   **Genentech**   Hyderabad, India   Sep 2020 – Jun 2022
- Spearheaded enterprise-wide cloud transformation initiative at Genentech, successfully migrating mission-critical hospital data systems and insurance holder databases from legacy infrastructure to AWS cloud platform.
- Achieved 99.9% system availability while delivering 30% reduction in operational maintenance costs.
- Orchestrated comprehensive data migration using AWS Database Migration Service (DMS) and engineered custom ETL solutions to ensure secure transfer of multi-terabyte customer datasets including sensitive patient information, insurance claims history, and healthcare provider records using Python, SQL.
- Executed database performance optimization initiative through advanced query tuning and schema refinement, resulting in 40% improvement in query processing efficiency for Genentech's hospital management systems.
- Implemented strategic indexing strategies and query restructuring to enhance overall system responsiveness during large-scale migration of patient records and insurance holder data, ensuring compliance with healthcare data security protocols while maintaining system performance.

Tech Mahindra, Associate Software Engineer   **Roche (TR)**   Hyderabad, India   Apr 2019 – Oct 2020
- Led development and optimization of mission-critical tax data collection applications, modernizing legacy VB6 codebase while maintaining compatibility with existing tax processing systems.
- Engineered comprehensive monitoring solution integrated with Looker analytics, enabling real-time tracking of data collection metrics and reducing processing errors by 81%.
- Implemented automated testing pipelines for tax calculation accuracy and data validation, ensuring compliance with US tax regulations.
- Worked with cross-functional collaboration with tax subject matter experts, UX designers, and development teams to enhance tax form processing workflows and user interface features.
- Established robust CI/CD infrastructure for seamless deployment of tax software updates, while maintaining extensive technical documentation for complex tax processing logic and data transformation rules.
- Developed custom ETL processes for importing tax data from various source systems, ensuring data accuracy and completeness throughout the collection pipeline in an Agile methodology.

Projects

Carpool Ridesharing. *Tech-stack:* Java, Spring Boot, HTML   Oct 2024
- Developed a carpool ridesharing application using Java and Spring Boot MVC, with features like user authentication, ride creation, search, and booking powered by RESTful APIs. Implemented database management with Hibernate and JPA, integrated Google Maps API for route optimization, and ensured security with Spring Security.

Odessey-Solo Travel app. *Tech-stack:* Flutter, Firebase, Dart programming   Sep 2024
- Designed and developed a modular solo travel app using Flutter, with a clean folder structure ensuring scalability and maintainability. Integrated Google Maps API for location search, and Firebase Authentication for secure user access.

Product Recommendation System. *Tech-stack:* Python   Apr 2024
- Developed and implemented a product recommendation system using Machine learning models like KNN collaborative filtering, rank-based methods, and model-based techniques like matrix factorization, enhancing the personalization and accuracy of recommendations in e-commerce.

Peptide Classification Using Neural Networks. *Tech-stack:* Python   Mar 2024
- Developed a neural network model for peptide classification using advanced feature engineering, hyperparameter tuning, and the Matthews Correlation Coefficient, achieving high accuracy and robustness in identifying antibiofilm properties.

Stock Market Notification using Pub/Sub Implementation. *Tech-stack:* Java, Docker, HTML   Feb 2024
- Implemented a real-time stock ticker system with Pub/Sub communication for high-frequency updates and timely notifications using Java, HTML & CSS. Optimized message queuing and data broadcasting techniques to manage large stock data volumes efficiently. Designed for scalability and reliability, ensuring seamless performance under high loads. Utilized Docker for containerization, enhancing deployment flexibility and system scalability.

Webserver Implementation. *Tech-stack:* Python, HTML   Jan 2024
- Developed a multi-threaded web server using socket programming for HTTP 1.0/1.1using python. Supported multiple client connections with efficient timeout management. Handled various HTTP error codes including 200, 400, 403, 404, and 501. Implemented request parsing and response generation for robust client-server communication.