# Shanmukh Krishna Boddu

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## Education

**M.S., Software Engineering** – GPA: 3.5/4.0 Expected Graduation: Dec 2023
**San Jose State University** – San Jose, CA, USA

**Related Coursework**
Data Structure and Algorithms, Object-Oriented Programming, Operating Systems, Software Engineering Processes, RDBMS, System Design, Machine Learning, Deep Learning.

## Skills

**Programming Languages:** Python, Java, C#, C++
**Web Technologies:** HTML, CSS, JavaScript, TypeScript
**Frameworks/libraries:** Django, React, ASP.NET, Flask, NodeJS, Spring Boot, Scikit-learn, Tensorflow, Pandas, Numpy
**Tools:** Tableau, VS Code, IntelliJ, Git, Postman, Artifactory, Jira, Confluence, Bitbucket, Jenkins, Docker
**Databases:** MSSQL, PostgreSQL, MongoDB, MySQL, Oracle, Hadoop, SQLite.
**Cloud Technologies:** AWS, Azure, GCP, Linux, Heroku

## Experience

*Software Engineer* **– NCR Corporation, India** Oct 2020 – Dec 2021

- Collaborated with 4 other Engineers and developed a Self-service web application using Django and React which helped the organization in reducing the manual effort by 80%.
- Worked on the front-end development using HTML, CSS and JavaScript and Python for server-side backend business logic implementation.
- Delivered user support services via Service Now ticketing system for Atlassian tool stack (Jira, Confluence, Jira Align), Artifactory and WhiteSource and achieved a user satisfaction rate of 98%.
- Implemented CI/CD workflows using GitHub Actions, reducing deployment time by 75% and improving overall development efficiency.
- Designed database solutions aligned with business objectives and implemented ETL pipelines, Stored Procedures, triggers, and performance tuning techniques resulting in 35% improvement in system performance and efficiency.

*Software Engineer Intern* – **NCR Corporation, India** Jan 2020 – Sep 2020

- Collaboratively developed a full stack application using ASP .NET (C#) to implement robust backend server operations and HTML/CSS/JavaScript for interactive and responsive user interface.
- Utilized JUnit for unit testing, leading to a notable 5-hour per week reduction in testers' workload.
- Leveraged Jira for bug tracking, successfully identified and resolved 15-20 bugs, ensuring improved software quality, and reducing potential business impact by 25%.

*Database Engineer* – **Artha Solutions, India** Jul 2019 – Aug 2019

- Designed and implemented scalable relational database management systems including Oracle, MySQL, PostgreSQL.
- Employed performance optimization, query tuning and index optimization to improve system efficiency and reduce response time by 30%.
- Created an ETL pipeline using data tools and Python to load user data from a database, displaying it on a Confluence page for document statistics, significantly improving readability.

## Publication

- Published a research paper on Human Age and Gender Estimation using Support Vector Machine (SVM) in ICACECS International Conference.

## Academic Projects

**Airport Management System** Aug 2022 – Dec 2022

- Collaborated with team members and implemented airport management system using technologies - Python (Django), SQLite, and HTML/CSS, enabling personnel to oversee flights and assets, allowing customers to access information and make bookings.
- Developed and deployed a flight price prediction feature using an ensemble method (Random Forest), achieving 96% accuracy.
- Executed role-based authentication using Django's user authentication system, resulting in an 80% reduction in unauthorized access and a 99.9% uptime upon successful deployment on PythonAnywhere cloud platform.

**Plant Disease Classification using Deep Learning** Aug 2022 – Dec 2022

- Created DenseNet model for plant disease classification achieving 97.4% accuracy.
- Implemented a web-based user interface for the plant disease classification model using Flask and ReactJS.
- Pre-processed a large-scale plant disease image dataset, including image augmentation and normalization, to improve model performance and generalization.

## Extracurriculars

**Instructional Student Assistant** – San Jose State University Aug 2022 - Present