

# SATHVIKA BALABHADRA

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## EDUCATION

### Arizona State University, Tempe

August 2023 - May 2025

Master of Science in Information Technology

GPA - 3.9 / 4.0

**Coursework:** Data Visualization, Advanced Big Data Analytics, Advanced Database Management Systems, NLP, AI in Cybersecurity, Information Systems Development, Cloud Architecture.

### Chaitanya Bharathi Institute of Technology, India

August 2018 - June 2022

Bachelor of Engineering in Computer Science & Engineering

GPA - 7.69 / 10

**Coursework:** Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Operating System, DevOps, Software Engineering, Object Oriented Programming(OOP).

## SKILLS

**Programming Languages:** Python, C, SQL, Java, C#, HTML5/CSS3, JavaScript, Bash.

**Web & Frameworks:** ReactJS, Angular, Flask, Django, Spring Boot, Pandas, NumPy, TensorFlow, PyTorch, RESTful API.

**Cloud & DevOps:** AWS (EC2, S3, Lambda, API Gateway, IAM, DynamoDB), Azure, Docker, CI/CD, Kubernetes, Linux.

**Tools & Databases:** MySQL, PostgreSQL, Git, JIRA, Databricks, PowerBI, MongoDB, Kafka, DOORS, Agile/Scrum, SDLC.

**Soft Skills:** Communication, Team Collaboration, Curiosity & Continuous Learning, Ethical Judgement, Project Management.

## CERTIFICATIONS

AWS (Amazon Web Services) - Certified Solutions Architect – Associate

April 2025 - April 2028

## WORK EXPERIENCE

### Software Engineer

September 2023 - Present

Arizona State University

Tempe, USA

- Engineer an Inventory Tracking System using Python, Django, & React, enabling real-time stock monitoring across multiple locations, integrating cloud databases & REST APIs for seamless data flow, and reducing inventory discrepancies by 35%.
- Build and fine-tune predictive inventory forecasting models using Pandas and Scikit-learn, boosting stock replenishment accuracy by 25% and minimizing overstock issues across multiple warehouse sites.
- Collaborate in Agile development cycles by leading daily stand-ups, participating in sprint planning, submitting Jira-based reports, and advancing project delivery efficiency by 20% through elevated team coordination.

### Associate Software Developer

February 2021 - July 2023

Collins Aerospace

Hyderabad, India

- Coordinated daily software verification tasks, assignments, and project schedules, increasing team productivity by 25% and minimizing project downtime by 15% across Boeing's flight control system programs during peak delivery cycles.
- Developed and implemented Python automation strategies that reduced manual testing time by 40%, strengthened code quality by 30%, and decreased rework-related defects by 30% within a six-month period.
- Led cross-functional collaboration engineering teams to identify root causes of software defects, implement corrective actions, and drive a 15% increase in verification workflow efficiency while ensuring full compliance with aerospace safety regulations.
- Spearheaded efforts to enhance requirement traceability within IBM DOORS, converting over 200 customer needs into testable system requirements and elevating traceability coverage by 20%, improving project readiness and system robustness.
- Optimized project workflows by redesigning verification processes and refining material handling efficiencies, resulting in a 20% cut in verification cycle times and enhanced team performance.
- Earned recognition for outstanding contributions through Collins' "Making a Difference" program by successfully managing quality control initiatives that led to substantial cost savings and advanced customer satisfaction.

## PROJECTS

**Movie Recommender** | Django, Python, Pandas, AWS S3, Heroku, HTML, CSS, JavaScript

- Built a full-stack movie recommendation system employing Collaborative Filtering, improving recommendation accuracy by 40%. Structured user authentication, movie search, and watchlist features, enhancing platform usability by 30%.
- Optimized backend performance by minimizing SQLite query response time by 25% and integrating AWS S3 for static file storage, cutting load times by 20% and achieving 99.9% uptime on Heroku for seamless accessibility.

**Crop Disease Detection** | Python, HTML, Pandas, Scikit-learn, OpenCV

- Redesigned a crop disease detection website using NLP-based text classification, upgrading diagnostic accuracy by 80%.
- Refined platform's usability, increasing farmer engagement by 50% through a streamlined and accessible web interface.
- Implemented an image captioning system with OpenCV, shrinking manual disease identification efforts by 30%.