

# SAI SINDHU MUPPANENI

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## Skills

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**Programming Languages:** C, Python, Java, SQL, HTML, CSS, MATLAB

**Libraries:** NumPy, Matplotlib, Pandas, Scikit-learn, TensorFlow, Keras, PyTorch

**Databases:** MySQL, SQL, MongoDB, PostgreSQL, DBase, MS Access

**Frameworks & Tools:** Node.js, Bootstrap, Git, Restful API, Jupyter Notebooks, Google Colab

**Data Analysis:** Power BI, Machine Learning Algorithms, Data Cleaning, Data Structuring, Data Normalization and Visualization, Feature Engineering, Deep Learning

**Cloud Services:** GCP, AWS (Lambda, DynamoDB, Redshift, S3, Glue), Azure

**Testing Tools:** JMeter, Selenium

**Development Procedures:** Agile, Systems development life cycle, RESTful Architecture, REST API Services

## Work Experience

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**ML/AI Engineer | Owting (Mar 2025 – Present, Remote, Part-time)**

- Developing AI-driven features for user engagement and personalized recommendations.
- Building and optimizing machine learning models for behavior analysis and content moderation.
- Collaborating with backend engineers to integrate AI capabilities into the mobile app.
- Enhancing data pipelines for scalability and real-time learning.
- Staying updated with AI advancements to drive innovation.

**Skills:** Python, TensorFlow, PyTorch, NLP, Recommendation Systems, Predictive Modeling, Cloud AI Solutions.

### Arcserve Pvt Ltd

Associate Quality Test Engineer

Hyderabad

Apr 2020 - Aug 2022

- Designed and executed test plans for data backup and recovery software, with a focus on enhancing software reliability and performance across storage environments including tape, FSD, NAS, and SAN.
- Conducted regression, integration, and end-to-end testing, which ensured seamless software functionality and identified bug reduction opportunities.
- Utilized automated testing tools such as Selenium and JMeter to streamline testing processes, achieving greater testing efficiency and improved accuracy.
- Identified and resolved software defects, significantly contributing to enhancing product quality and increasing user satisfaction.

## Education

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### Portland State University

Master of Science, Computer Science

Sep 2022 - Jun 2024 - GPA: 3.56/4

### St. Ann's college of Engineering and technology, (affiliated under JNTUK)

Bachelor of Technology, Electronics and Communication Engineering

Jun 2016 - Sep 2020 - GPA: 3.4

## Projects

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### Detection of Lung Tuberculosis

*Python, Power BI, Machine Learning, Jupyter Notebook*

- Developed a machine learning model in Python for medical image classification, enabling automated diagnostic processes for tuberculosis detection.
- Applied data preprocessing techniques and advanced algorithms like KNN, Gradient Boosting, and ensemble classifiers for improved model accuracy.
- Designed interactive Power BI dashboards to visualize model metrics, classification accuracy, and diagnostic insights, fostering data-driven decisions in healthcare applications.

## **ADD-IT in AI: Puzzle Game Optimization**

*Python, Minimax Algorithm, Alpha-Beta Pruning*

- Engineered an AI-driven optimization model to enhance decision-making efficiency in a puzzle-solving environment.
- Integrated Minimax and Alpha-Beta Pruning algorithms, reducing computational complexity and improving real-time problem-solving capabilities.
- Analyzed and refined AI performance metrics over multiple trials, demonstrating the application of heuristic algorithms in model optimization and decision automation.

## **Planets Voice Application**

*Dialogflow, Node.js, Firebase Functions, APIs*

- Designed an AI-powered voice application that automates the retrieval and presentation of planetary data through natural language processing.
- Implemented API integration for real-time data transfer, showcasing expertise in feature detection and automation for unstructured data insights.
- Enhanced user interaction flow using chatbot technologies, combining intelligent data analytics and NLP techniques to optimize engagement and usability.

## **Cloud-Based E-Commerce Web Application**

*Python, Node.js, AWS Lambda, DynamoDB, S3, REST API*

- Designed and developed a scalable, serverless e-commerce platform using AWS Lambda for backend logic and DynamoDB for data storage.
- Created secure and efficient REST APIs for order management and user authentication, improving platform functionality and scalability.
- Reduced infrastructure costs by 25% and optimized system performance, enabling better handling of high user traffic.

## **Real-Time Chat Application**

*Python, Flask, WebSockets, AWS EC2, MongoDB*

- Developed a real-time chat application that enables secure, low-latency communication using WebSockets and Flask.
- Integrated MongoDB for data storage and optimized queries, improving system performance and reducing server response time by 25%.
- Deployed the application on AWS EC2, ensuring scalability and reliability for users.

## **Autonomous Ambulances in Healthcare**

*AI Simulation Software, Data Analysis*

- Conducted a comprehensive analysis of autonomous ambulances, focusing on the automation of emergency response and its implications on operational efficiency.
- Evaluated the ethical, technological, and economic impacts of AI-driven systems using simulation software for predictive insights.
- Proposed data-backed methodologies to integrate autonomous technologies while addressing safety and privacy concerns.

## **Blood Cell Image Classification**

*Convolutional Neural Networks (CNNs), MATLAB, Sony Neural Network Console*

- Built and trained CNN models to classify white blood cell images, achieving superior accuracy compared to traditional machine learning methods.
- Automated feature detection and analysis of imaging datasets, leveraging advanced neural network architectures for scalable biomedical applications.
- Delivered insights from image-based data, demonstrating capabilities in predictive analytics and feature quantification in healthcare imaging systems.

## Certifications

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- [AWS cloud practitioner](#)
- [Build and Deploy Machine Learning Solutions on Vertex AI](#)
- [Prompt Design in Vertex AI](#)
- [Create ML Models with BigQuery ML](#)
- [Engineer Data for Predictive Modeling with BigQuery ML](#)
- [Inspect Rich Documents with Gemini Multimodality and Multimodal RAG Skill Badge](#)
- [Develop GenAI Apps with Gemini and Streamlit](#)
- [Deploy Kubernetes Applications on Google Cloud Skill Badge](#)