

# Sruthi Satyavarapu

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## CONTACT INFORMATION

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## SUMMARY

Masters student with over **6 years of experience** in **software development**, with growing expertise in **data science**, **machine learning**, and **data visualization**. Skilled in **Python**, with hands-on experience using **Tableau** and **Scikit-learn** for analyzing data and building predictive models. Eager to apply and expand my skills in a real-world internship focused on **data-driven decision-making**.

## EDUCATION

**Master of Science in Computer Science** (Aug 2024 - Current)  
University of Pacific, Stockton, CA | GPA - 4  
Relevant Coursework: Machine Learning, Data Science, Storytelling & Visualization

**Master of Science in Technology in Medical Software** (Aug 2014 - May 2016)  
Manipal Institute of Technology, Manipal, India | GPA - 3.7

**Bachelor of Engineering in Bio Medical Engineering** (Aug 2010 - May 2014)  
Jawaharlal Nehru Technological University, India | GPA - 3.3

## WORK EXPERIENCE

**Research Assistant** at the University of the Pacific (*PI: Dr Pramod Gupta*) (June 2025 - Present)  
Research and Design of Domain-Adaptive Modular Conversational AI Architecture

- Designing a plug-and-play modular system architecture for Retrieval-Augmented Generation (RAG) chatbots to enable easy swapping of components (vector databases, embedding models, LLMs) for multi-domain adaptability for researchers and developers.
- Built a prototype with ReactJS frontend and FastAPI backend, integrating ChromaDB for embedding-based retrieval with re-ranking and query expansion to enhance response relevance.
- Developing domain packs to support scalable, reusable deployment across diverse domains.

Technologies: Python, ChromaDB, HuggingFace, Ollama, FastAPI, ReactJS

**Research Assistant** at the University of the Pacific (*PI: Dr Jinzhu Gao*) (June 2025 - Present)  
Position and Sleep Tracking using Wearable Sensor Data: A Comprehensive Fall Detection and Activity Monitoring Approach

- Currently designing and implementing fall detection and sleep monitoring algorithms using multi-sensor wearable data (accelerometer, gyroscope, PPG).
- Applying data preprocessing, feature extraction, and machine learning techniques to enhance activity classification accuracy.

Technologies: Python, Pandas, NumPy, scikit-learn, Matplotlib

**PHP Developer** at Tata Consultancy Services(TCS), Hyderabad(July 2021 - July 2023)  
Contractor from July 2021 to October 2022 , Full time from October 2022 to March 2023

- Developed and managed critical B2B applications for the MARS PetCare portfolio, ensuring high availability and performance
- Improved server side performance by 20% through optimization and feature enhancements
- Strengthened application security by implementing OWASP Top 10 mitigations and reducing potential vulnerabilities by 35%
- Served as a dedicated mentor and onboarding lead for new team members, providing hands-on guidance and technical training.

Technologies: Ez, MySQL, PHP, JavaScript

**Web Developer** at Hyper Interact Services (Feb 2020 - May 2021)

- Developed and managed web applications tailored for SEM campaigns.
  - Created and optimized landing pages within web applications to enhance user engagement
- Technologies: Drupal, PHP, JavaScript, MySQL

**Senior Software Engineer** at Foray Software Private Limited(July 2019 - Oct 2019)

- GTK Web App: Enhanced the front-end inventory search functionality for Mars employees, resulting in a 30% faster search experience and a 15% increase in task efficiency. Partnered closely with cross functional teams to integrate and ensure seamless functionality and improved user satisfaction
- Technologies: Drupal, JavaScript, MySQL

**Associate Analyst** at PurpleTalk(Feb 2017 - June 2019)

- Canya App: Developed various features of android app to enable peer to peer digital services
  - Cuckuu App: Involved in development and unit testing of a social networking alarm app to surprise users. Received the Best Performance Award for simultaneous management of projects
  - SILA: Developed and maintained the payment and invoice module within the SILA Attendance Management System. Received **Best Employee** Award for outstanding contributions.
- Technologies: Yii Framework, MongoDB, Javascript, JQuery

**Research Associate** at Excellera(September 2016- December 2016)

**Intern** at Excellera(GVK Bio) (June 2015- September 2016)

- Pathway Enrichment: Developed an automated visualization tool to map disease associations and biological pathways for a given target gene ID, improving workflow efficiency by 25% and accelerating bioinformatics analysis.
- Technologies: PHP, Javascript, JQuery, Ajax, HTML, CSS, d3.js

## PROJECTS

- **AI Companion for Senior citizens[Ongoing]** Developing an AI-driven elderly care platform enabling medical data extraction, patient management, and multimodal input.  
Technologies: AWS Bedrock, MongoDB, FastAPI, React,Python
- **Strawberry Fruit Ripeness Using Machine Learning [Ongoing]** Developing a supervised learning model to classify strawberry ripeness; authored a white paper detailing methodology and findings.  
Technologies: Python, Scikit-learn, Pandas
- **Adidas Sales Dashboard** Developed a Tableau dashboard to analyze Adidas sales data of 2023-2024, uncovering regional trends and product performance insights  
Technologies: Python , Tableau
- **Big Data Analysis of Weather on Music Trends** Working on exploratory data analysis of music trends from various Music charts and their correlation with weather patterns.  
Technologies: Python, Matplotlib, Seaborn, Tableau
- **Desert Survival Game** Designed and implemented a grid-based world map system where players navigate locations to survive by collecting resources, crafting tools, and facing challenges.  
Technologies: C++

## TECHNICAL SKILLS

<b>Programming Languages:</b>	Python, PHP, JavaScript, C++
<b>Machine Learning &amp; Data Science:</b>	Scikit-learn, TensorFlow, Seaborn, Tableau, HuggingFace, LangChain, Sentence Transformers
<b>Web Development:</b>	HTML/CSS, JavaScript (D3, JQuery, JSON, AJAX, ReactJS, Bootstrap), Drupal, Yii, Laravel
<b>Databases:</b>	MySQL, MongoDB, ChromaDB, Pinecone
<b>Version Control:</b>	Git