

Sanjana Garimella

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[Portfolio](#)

[Linkedin](#)

[Github](#)

Student and Research Assistant at UC San Diego | Ex-Software Developer | Data Science and NLP Enthusiast

I'm a current Master's in Data Science student and Research Assistant at the University of California, San Diego, with a passion for NLP, data science, and large-scale computing. Formerly a software developer at IBM, I specialize in machine learning and full-stack development using Python and Flask, creating innovative, data-driven solutions while staying updated with the latest advancements in AI and NLP.

Education

Master of Science in Data Science, University of California San Diego

September 2025 – Present

Coursework: Recommender Systems and Web Mining, Probability and Statistics for Data Science

Bachelor of Technology in Computer Science, K L University

June 2019 – May 2023

- GPA: 3.65/4.0
- Specialization in Artificial Intelligence and Intelligence Process Automation

Coursework: Machine Learning, Database Management Systems, Python Full Stack Development, Artificial Neural Networks, Perception and Computer Vision, Data Structures, and Analysis & Design of Algorithms

Highlights:

- Developed "Take a Trip," a Django-based travel platform, recognized as one of the best projects at the university.
- Built a crop prediction model using Gradient Boosting Classifier, achieving 95% accuracy in predicting crop yields based on environmental factors.

Experience

University of California San Diego

La Jolla, California

Research Assistant

October 2025 – Present

- Support large-scale neuroscience and data-intensive research by maintaining and optimizing Python-based analysis pipelines on the Voyager GPU supercomputer.
- Automate deployment workflows using Docker and Kubernetes to enhance scalability and system reliability.
- Collaborate with faculty and researchers to improve computational reproducibility and data processing efficiency across research environments.

Skills: Python, Docker, Kubernetes, MongoDB, HPC Systems, Research Computing

IBM

Bangalore, India

Software Developer

June 2023 – June 2025

- Automated security scanning using OWASP tools, Python, REST APIs, and Jenkins, streamlining vulnerability management and ensuring compliance with OWASP guidelines for secure IBM z releases.
- Collaborated with developers to improve the MEND vulnerability tracking system and automate related processes, onboarding 100+ repositories and impacting 18 subsystems across global teams to strengthen security standards for upcoming releases.
- Participated in the WatsonX challenge, showcasing my data science skills, and received recognition for creating the best prompt within the team.
- Utilized Python and Jenkins to automate processes, improving defect creation and issue identification efficiency for IBM z systems, including daily regression runs for power subsystem control across BMCs in CPC and I/O drawers.
- Contributed to dynamic script execution using Flask during a hackathon and participated in a TEF data analysis project under IBM Research, focusing on deriving actionable insights.

- Collaborated on developing an MVP using LLMs for multi-cloud provisioning on IBM Cloud, achieving a 40% cost reduction and winning the People's Choice Award for innovation.
- Skills:** Back-End Web Development, OWASP, Vulnerability Scanning, Vulnerability Assessment, Grafana, Influxdb, Python, Rest APIs, Threat & Vulnerability Management, Linux, Ansible, Github, Flask, LLMs, IBM Cloud, Jenkins

Highlights:

- ISDL ZSD Star of the Month (December 2023): Recognized for automating Mend scanning, onboarding over 100 repositories, and significantly improving vulnerability tracking accuracy and efficiency.
- Infrastructure All Hands Recognition - Team Award (April 2024): Awarded for streamlining SPbD onboarding for 18 global subsystems and automating security scans to enhance operational efficiency and compliance with OWASP standards.

IBM

Software Developer Intern

Bangalore, India
January 2023 – June 2023

- Designed and implemented a Grafana dashboard on a virtual machine, incorporating self-signed certificates and LDAP user authentication.
- The dashboard consolidates security scan results, offering upper management a valuable tool for monitoring and informed decision-making.

Skills: Back-End Web Development, Vulnerability Scanning, Grafana, Python, Rest APIs, Threat & Vulnerability Management, Linux, Jenkins

Amazon

ML Summer School

July 2022 – July 2022

- Participated in a competitive machine learning internship, engaging in expert-led discussions on supervised learning, deep neural networks, and reinforcement learning, and gaining practical insights into their applications in a tech environment.

Skills: Machine Learning, Deep Neural Networks (DNN), Deep Learning, Supervised Learning, Unsupervised Learning

Indian Servers

Machine Learning Engineer

August 2021 - November 2021

- Worked on a Face Mask Detection project in response to the COVID-19 pandemic, using OpenCV, Keras, and TensorFlow.
- This project offered hands-on experience with machine learning and deep learning algorithms, highlighting their practical application in addressing real-world challenges during the COVID-19 pandemic.

Skills: Keras, Machine Learning, TensorFlow, Deep Learning, OpenCV

Projects

Crop Prediction

[GitHub link](#)

- Implemented machine learning algorithms (KNN, SVM, Decision Tree, Random Forest, and Gradient Boost) to predict optimal crops based on soil properties and weather conditions.
- Achieved over 95% accuracy in crop predictions, demonstrating the potential of machine learning to improve agricultural decision-making and sustainability.

Skills: Python, NumPy, Pandas, Scikit-Learn, Seaborn, Matplotlib

Green Grow

[GitHub link](#)

- Developed a platform to connect green entrepreneurs with stakeholders, experts, and customers, fostering the promotion of eco-friendly products and sustainability.
- Utilized Spring Boot, MySQL, and AWS to ensure seamless functionality and deployment of the platform.

Skills: Spring Boot, AWS, MySQL, JavaServer Pages (JSP), Java

Static Web Hosting Using AWS

[GitHub link](#)

- Deployed a static website on Amazon EC2 within a Virtual Private Cloud (VPC), using PuTTY for secure SSH access.


Skills: Amazon VPC, Cloud, AWS, Amazon EC2

[GitHub link](#) 

Loan Eligibility Prediction

- Developed a machine learning model to predict loan eligibility using algorithms such as Decision Tree, Random Forest, and Logistic Regression.
- Identified Random Forest as the most effective algorithm, resulting in an automated solution that streamlined the loan eligibility evaluation process.

Skills: Supervised Learning, Python, Machine Learning

[GitHub link](#) 

Take A Trip

- Led a team to develop a travel and hospitality management website, simplifying trip planning for travelers exploring major cities in India.
- The platform offered curated destination suggestions, hotel bookings, and direct access to trusted travel agents, earning recognition as one of the top projects in college.

Skills: Django, MySQL, Python, HTML, Database Management System (DBMS), Web Development

Technical Skills

Languages: Python, Java, C++, MySQL, R

Technologies/Frameworks: Django, Spring Boot, AWS, Flask, NumPy, Pandas, Matplotlib, Jenkins, Linux

Developer Tools: VS Code, Eclipse, Grafana, GitHub, Jupyter