Sanya Garg

sg157@rice.edu • (408)-306-5195 • https://www.linkedin.com/in/sanya-garg/

Education

Rice University, *B.S. in Computer Science, Minor in Business;* 3.89/4.0 GPA **Aug 2022 – May 2026**

Relevant Coursework: Data Structures & Algorithms, Tools & Models for Machine Learning & Data Science, Concurrent Program Design, Compilers, Computer Systems, Object Oriented Programming, Discrete Mathematics, Linear Algebra, Probability & Statistics

Skills

Languages: Java, Python, C, Golang, SQL, HTML/CSS, JavaScript/TypeScript, Julia, Bash/Unix Shell Scripting
Technologies: Git, Angular, React, Apache Spark & Hadoop, Linux, AWS, MongoDB, Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, PyTorch, Classification & Regression Algorithms, JUnit, Docker & Kubernetes, Web Scraping & Data Collection (BS4, Selenium)
Expertise and Interests: Full Stack (Frontend/Backend) Development, Distributed Systems, Machine Learning, Deep Learning
Hobbies: Acrylic Painting, Jewelry Making, Hiking, Table Tennis, Crossword Puzzles

Experience

Datadog, ***Software Engineering Intern*** **May 2025 – Aug 2025**

- Designed and implemented a **Go-based MCP server** with dynamic tool generation from protocol buffers, enabling LLM-driven interactions with Datadog's metrics platform infrastructure, sharding, and deployments.
- Built gRPC functionality to automatically retrieve Kubernetes cluster data, eliminating the need for manual list maintenance.

Capella Space, ***Software Engineering Intern*** **May 2024 – Aug 2024**

- Utilized cutting-edge **linear programming** and **combinatorial optimization** techniques to automate the tasking, scheduling, and commanding of SAR satellites.
- Developed a Python library to streamline the creation and validation of spacecraft commands, reducing lines of code by **55%**.
- Implemented automatic input validation, unit tests, and CLI tools using **Pydantic, FastAPI, Pytest, and MongoDB,** creating a more maintainable and error-resistant codebase to improve developer productivity and shorten iteration cycles by **40%**.

Rice University Sketching & Hashing (RUSH) Lab, ***Undergraduate Researcher*** **Jan 2023 – Present**

- Researched the BLISS deep learning algorithm that uses iterative repartitioning to perform large-scale image classification.
- Pioneered the adaptation of the BLISS algorithm to implement **class-incremental learning** using **Pandas**, **Tensorflow, Pytorch**.

GE Healthcare, ***Software Engineering Intern*** **May 2023 – Aug 2023**

- Migrated the Emitter Calibration tool to the latest microservices architecture, enhancing its scalability and maintainability.
- Developed a new **Angular-based frontend from scratch** and refactored the **backend to Java and Springboot.**
- Containerized the application with **Docker** to be deployed to **Kubernetes** clusters on CT machines.

Case Western BrIC Laboratory, ***Machine Learning Research Intern*** **Jun 2021 – Aug 2022**

- Performed deformation feature extraction and survival analysis on MRI data using **R, Python, Tensorflow, and Keras**.
- Implemented Python scripts to automate the data preprocessing pipeline (quality control, bias correction, mask generation, etc.).

Projects

Oil Production Random Forest Prediction, ***Rice Datathon*** **(1st Place Winner)** **Jan 2024**

- Won first place overall out of 60+ teams in a 36-hour data science and machine learning challenge.
- Transformed an incomplete oil production dataset into a high-quality resource using innovative data cleaning & feature engineering.
- Developed random forest, deep neural network, and gradient-boosting regressor models for prediction using **Pandas, Pytorch, and Tensorflow**, achieving the **lowest RMSE** of the challenge with the random forest model.

Automated Test Case Generation Tool (FEAT) **Dec 2023**

- Built a **Java** tool to automatically generate an optimal and minimal set of test cases for any given Python function.
- Applied object-oriented principles and design patterns to implement its modular components (parser, test generator, optimizer).

Activities and Leadership

Codenovate, ***Founder, Board Member, Former President*** **Jun 2018 – Present**

- Founded Codenovate, a 501(c)3 non-profit organization dedicated to making CS education accessible to all.
- Managed **20+** international chapters & **45+** team members, developed curricula for programs, and taught topics ranging from mobile app development to machine learning to **1500+** underrepresented students.

Lovett College Cultural Committee, ***Committee Head*** **Mar 2024 – Present**

- Coordinated logistics for a multicultural exhibition for **200+** students, ensuring seamless event execution and engagement.