Siddharth Narsipur

585-410-8848 | snarsipu@u.rochester.edu | sidnarsipur.github.io | linkedin.com/in/sid-narsipur |

Education

University of Rochester — Rochester, NY

Bachelor of Science in Computer Science, GPA: 3.8, Dean's List — *Aug. 2022 – May 2026*

- **Coursework:** Operating Systems, Distributed & Parallel Computing, Data Structures & Algorithms, Computer Architecture, Computer Vision, Artificial Intelligence, Programming Languages

Experience

Software Engineer Intern — May 2023 – July 2023

LiquiDonate Inc. — *San Francisco, CA*

- Enhanced marketplace by integrating sell & order features into REST and GraphQL APIs for use by large retailers.
- Implemented concurrent server-side caching to handle client requests, reducing API call latency by 25%.
- Built a scalable authentication microservice in Go that periodically revokes outdated API credentials and creates new ones
- Deployed unit tests with the Ginkgo framework and set up API performance logging on Google Cloud using Sentry.
- Automated end-to-end inventory tracking for 100,000+ SKUs with complex variations using Shopify and Stripe webhooks.
- Designed a highly requested admin dashboard in React that displayed updates for 15,000+ real-time shipping movements.

Undergraduate Research Assistant — May 2024 – Present

URCS Bear Lab — *Rochester, NY*

- Developed a application for Meta Quest headsets with Unity and C# that can adapt Virtual Reality UIs for multiple environments, reducing setup time by 30% and alleviating the need for manual adjustments.
- Implemented a linear programming model in Python using the Gurobi solver that considers 50+ input parameters and places virtual elements in 3D space while preserving visibility and spatial utility.
- Created an intuitive VR tool for HCI research studies that allows subjects to simultaneously view up to 20 virtual rooms at once and switch between them with controller actions.

Teaching Assistant — Jan 2023 – Present

Hajim School of Engineering — *Rochester, NY*

- Hold office hours to improve lecture understanding and guide students with assignments for Data Structures, AI courses.
- Conducted workshops to improve beginner understanding in topics such as Machine Learning and Sorting Algorithms.

Projects

3D PBR (Physically Based Rendering) Material Generation | *Python, PyTorch, CUDA, Bash scripting* — Github

- Constructed a computer vision pipeline using the ControlNet algorithm with Stable Diffusion models to generate highly photorealistic PBR textures from photographs.
- Trained deep learning models on NVIDIA A100 GPUs using CUDA acceleration and the Mat Synth dataset, resulting in a 10% lower error rates through optimized hyperparameter tuning and data preprocessing.

Group4Good (Built @ HackMIT) | *Python, Flask, React, IRIS Vector DB* — Github

- Built a platform with Flask and Python to securely analyze group purchase data and match common interests with relevant non-profits based on K-Means clustering and data analytics.
- Leveraged Capital One's Nessie API and InterSystem's IRIS Vector Search to identify and recommend charities based on transaction patterns, attaining 92% user-charity match satisfaction.

Nearvents (Dandyhacks Winner) | *Angular, TypeScript, Ionic, Firebase* — Github

- Created a full-stack event management app used by 500+ students with real-time feed updates powered by Firestore.
- Implemented a location-based notification feed using Capacitor Geolocation API that increased app engagement by 40%.

Distributed Counter | *Python, Java, Docker, Kubernetes* — Github

- Designed and implemented a distributed counter service with support for idempotency tokens and atomic operations.
- Integrated Apache Kafka's durable queuing system for reliable event logging and data loss prevention, and deployed as a containerized service with Docker.

Technical Skills

Languages: Java, Python, Go, C, C#, SQL, Postgres, JavaScript, HTML/CSS, TypeScript
Frameworks: React, Node.js, Flask, Angular, Ionic, Next.js
Developer Tools: Git, Docker, Firebase, Google Cloud Platform, Scrum, Agile, Kubernetes, Flask, Unity, OpenCV